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REPORT

TO

International Joint Commission

RELATING TO

OFFICIAL REFERENCE

RE

Lake of the Woods Levels

TABLES

By

ADOLPH F. MEYER ARTHUR V. WHITE

Consulting Engineers

WASHINGTON
GOVERNMENT PRINTING OFFICE
1916

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50716

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TABLE 1

MONTHLY PRECIPITATION ON OR NEAR WATERSHED

RECORDS OF U. S. WEATHER BUREAU AND CANADIAN METEOROLOGICAL SERVICE

1885

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Port Arthur	0.23	0.54	1.12	2.55	1.43	3.28	4.25	1.44	1.66	0.37	1.55	0.42	18.84
Duluth	0.61	0.32	0.77	0.89	1.53	4.82	3.46	2.51	2.35	0.79	1.37	0.54	19.96
St. Vincent	0.32	0.10	0.46	2.85	1.59	2.92	3.82	0.95	0.98	0.93	1.12	0.54	16.58
Moorhead	0.02	0.08	0.31	3.43	2.27	7.92	3.34	1.47	2.20	0.68	0.64	0.32	22.68
Winnipeg	0.23	0.44	1.12	1.82	1.94	3.05	2.65	1.99	0.74	0.59	0.84	1.22	16.63

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	0.3	0.4	1.0	2.1	1.5	3.4	3.7	1.8	1.7	0.6	1.3	0.6	18.4
Lower Rainy	0.4	0.3	0.7	2.0	1.6	4.0	3.5	1.5	1.6	0.7	1.1	0.5	17.9
Lake of Woods	0.3	0.3	0.8	2.1	1.8	3.1	3.3	1.7	0.9	0.7	1.0	0.8	16.8

1886

Port Arthur	1.09	1.76	0.62	1.92	0.73	1.91	1.63	1.25	7.54	3.06	1.23	0.54	23.28
Savanne	1.90	2.30	0.40	0.09	*T	2.20	0.21	0.65	4.57	3.59	1.30	0.90	18.11
Duluth	2.26	1.81	1.07	4.97	1.93	5.35	1.48	2.23	6.05	2.45	2.84	0.93	33.37
St. Vincent	0.49	0.46	0.29	2.09	1.53	2.15	2.27	0.41	3.20	1.36	0.52	0.27	15.04
Kenora	1.10	0.90	0.50	1.82	*T	1.96	1.94	0.85	2.04	0.30	1.80	0.10	13.31
Moorhead	0.94	0.78	0.14	5.49	2.51	3.71	5.40	1.32	1.31	2.21	2.42	0.53	26.76
Winnipeg	0.61	0.50	0.38	1.73	1.19	1.20	0.67	1.17	4.75	1.22	0.57	0.39	14.38

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	1.6	1.7	0.6	1.8	0.8	2.6	1.3	1.0	4.1	2.6	1.8	0.7	20.6
Lower Rainy	1.3	1.0	0.5	3.1	1.7	3.0	2.2	1.2	3.4	1.8	1.8	0.5	21.5
Lake of Woods	1.1	0.9	0.4	2.0	0.5	2.1	2.1	0.9	2.6	1.2	1.5	0.3	15.6

1887

Port Arthur	0.94	0.89	0.52	0.81	2.35	1.68	9.21	1.02	2.94	2.51	1.66	1.44	25.52
Savanne	0.90	1.80	0.40	0.40	1.80	1.40	4.48	2.49	3.86	2.07	2.30	0.90	22.80
Barclay	.....	.....	.....	1.25	2.79	.....	3.14	.....	1.21	.....	.....	.....	.....
Duluth	1.62	0.81	0.55	1.58	4.93	2.71	4.17	1.53	2.68	3.34	1.99	2.65	28.56
Pokegama Falls	.....	.....	.....	.....	3.79	5.36	5.29	2.37	1.58	2.81	0.73	2.65	.....
Winnibigoshish	.....	.....	.....	1.64	1.58	5.56	4.40	2.56	0.84	3.03	0.57	1.93	.....
St. Vincent	0.68	0.83	0.48	1.43	3.57	4.15	4.28	1.68	0.45	0.16	0.22	0.54	18.47
Winnipeg	0.71	1.07	0.93	1.14	3.01	2.94	2.02	1.49	1.77	0.45	1.03	1.37	17.98

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	0.9	1.3	0.5	1.3	2.5	3.3	4.1	2.1	2.0	2.4	1.5	1.5	23.4
Lower Rainy	0.9	0.8	0.5	1.3	3.1	4.5	4.4	2.1	1.0	1.9	0.6	1.5	22.6
Lake of Woods	0.7	0.9	0.5	1.3	2.8	3.8	3.6	1.7	0.8	1.1	0.5	0.8	18.5

1888

Port Arthur	1.46	0.58	2.76	2.90	2.66	4.94	1.64	3.63	2.43	2.22	1.12	0.02	26.36
Savanne	1.80	1.90	1.10	0.90	2.18	4.50	2.06	3.51	1.36	3.02	2.91	0.26	25.50
Barclay	.....	.....	.....	.....	2.50	2.41	.....	.....	.....	.....	.....	.....	.....
Duluth	1.53	0.24	0.81	1.97	4.12	5.54	3.86	4.17	2.27	1.68	0.87	0.25	27.31
Pokegama Falls	1.13	0.45	1.93	2.17	2.75	.....	3.97	0.76	1.56	1.68	1.16	0.18	.....
Winnibigoshish	.....	0.26	1.45	.....	2.22	.....	4.07	1.04	2.01	1.89	0.77	0.17	.....
St. Vincent	0.71	0.22	0.93	1.06	0.28	7.37	2.76	0.52	1.22	1.32	0.30	0.53	17.22
Winnipeg	0.79	0.31	1.09	1.29	0.18	3.10	3.88	1.13	1.49	2.70	0.50	0.48	16.94

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	1.4	1.0	1.3	1.5	2.5	4.0	2.9	2.4	1.6	2.4	1.8	0.2	23.0
Lower Rainy	1.1	0.3	1.4	1.6	2.2	5.0	3.7	1.1	1.6	1.9	0.9	0.3	21.1
Lake of Woods	1.0	0.3	1.0	1.1	1.7	4.0	3.3	1.1	1.4	1.6	0.7	0.4	17.6

*T denotes trace.

TABLE 1—Continued

MONTHLY PRECIPITATION ON OR NEAR WATERSHED

RECORDS OF U. S. WEATHER BUREAU AND CANADIAN METEOROLOGICAL SERVICE

1889

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Port Arthur	1.34	0.32	1.04	3.04	2.40	0.50	3.82	3.69	3.86	1.64	0.94	1.91	24.50
Savanne	4.45	1.70	2.10	1.67	2.65	1.50	2.73	1.41	2.78	1.45	0.70	3.40	26.54
Barclay	.....	1.30	0.60	0.25	2.54	1.14	4.57	1.80	4.80	1.81	2.64	1.90	.....
Duluth	1.34	1.38	1.67	3.35	2.05	1.85	5.53	7.87	4.02	0.34	0.87	1.77	32.04
Pokegama Falls	1.34	1.61	1.34	1.82	1.18	2.08	4.32	6.21	2.71	0.31	1.30	1.43	25.65
Winnibigoshish	1.32	1.18	0.82	1.83	0.85	2.14	3.59	4.18	2.85	0.25	1.03	1.26	21.30
St. Vincent	0.82	1.03	0.35	0.69	0.81	0.76	1.23	2.20	2.77	0.18	1.20	2.40	14.44
Winnipeg	1.57	1.03	0.29	0.85	1.79	0.45	2.38	0.95	2.67	0.86	0.73	1.38	14.95

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	2.4	1.5	1.2	1.4	2.2	1.6	3.8	3.2	3.3	1.2	1.4	2.1	25.3
Lower Rainy	1.3	1.3	0.9	1.3	1.3	1.6	3.8	4.2	2.8	0.5	1.2	1.7	21.9
Lake of Woods	1.2	1.2	0.6	0.6	1.7	1.2	3.2	2.3	3.5	0.9	1.6	2.0	20.0

1890

Port Arthur	0.85	1.05	0.54	0.89	2.09	2.66	5.20	2.29	2.58	1.26	0.50	0.26	20.17
Savanne	3.40	1.40	1.20	0.22	1.55	1.35	2.37	1.53	2.11	1.60	1.10	1.60	19.43
Barclay	3.30	3.43	1.85	1.97	2.55	4.11	6.48	3.98	7.86	2.60	0.96	1.42	40.51
Ignace	.....	.....	0.15	2.21	2.43	2.75	2.44	.....	.....	2.83	0.90	2.97	.....
Duluth	0.87	1.09	1.16	1.75	2.24	3.33	3.51	3.62	2.39	3.03	0.91	0.19	24.09
Pokegama Falls	0.65	0.95	1.21	1.27	1.76	7.42	2.64	3.16	3.91	2.81	0.59	0.26	26.63
Winnibigoshish	0.56	1.01	0.82	0.54	2.56	5.19	2.74	2.88	4.74	2.55	0.40	0.30	24.29
St. Vincent	1.98	0.63	0.95	1.41	1.29	4.08	2.32	2.40	3.82	2.79	0.19	0.23	22.09
Winnipeg	0.51	0.82	1.54	1.20	2.10	2.46	5.61	3.05	3.06	3.67	0.43	0.46	24.91

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	2.0	1.3	1.1	1.4	2.2	4.0	3.4	3.1	3.6	2.4	0.9	0.8	26.2
Lower Rainy	1.5	0.9	1.1	1.3	2.1	5.2	3.0	2.7	4.4	2.7	0.5	0.3	25.7
Lake of Woods	2.5	1.0	1.3	1.5	2.1	3.9	4.2	3.0	3.8	2.8	0.4	0.4	26.9

1891

Port Arthur	0.39	0.26	1.01	0.83	0.62	0.93	4.16	3.16	3.24	2.39	0.75	2.65	20.39
Savanne	1.15	2.15	2.40	1.95	3.73	2.45	4.45	3.53	4.90	1.90	0.60	1.40	30.61
Ignace	2.95	1.95	0.53	3.60	7.74	4.37	.....	.....	.....	.....	.....	.....	.....
Duluth	0.67	2.07	3.13	1.71	2.28	2.67	3.82	3.11	3.31	1.83	1.11	3.76	29.47
Little Forks	1.05	1.80	0.60	4.90	4.55	6.70	10.00	2.50	11.20	5.10	0.76	4.66	53.82
Pokegama Falls	0.84	1.63	1.37	.....	0.59	4.53	5.24	.....	.....	.....	.....	.....	.....
Winnibigoshish	0.57	1.15	1.10	1.32	1.49	3.81	5.47	2.46	4.34	1.25	.....	1.70	.....
St. Vincent	0.78	2.04	1.23	1.68	1.29	8.17	2.56	3.12	2.43	2.38	0.88	1.79	28.35
Winnipeg	0.78	0.88	0.38	1.13	0.94	4.72	1.94	3.90	2.20	1.05	1.18	1.01	20.11

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	1.0	1.7	1.2	2.4	3.0	4.0	4.3	3.1	4.2	1.6	0.8	1.7	29.0
Lower Rainy	0.8	1.7	1.0	1.9	1.8	5.0	4.6	2.7	3.9	1.6	0.8	1.9	27.7
Lake of Woods	0.8	1.6	1.0	2.2	2.0	5.5	3.6	3.2	3.3	1.6	0.9	1.5	27.2

1892

Port Arthur	0.23	0.32	0.49	2.90	2.22	1.19	2.14	4.02	3.08	1.13	1.10	0.30	19.12
Savanne	0.80	0.90	0.60	2.26	2.05	3.06	3.40	8.37	2.10	1.75	1.00	0.40	26.69
Duluth	0.48	1.46	2.02	3.70	6.54	5.32	2.18	4.28	0.32	0.38	1.69	0.15	28.52
Fort Frances	.....	.....	.....	3.36	6.00	3.04	3.50	5.83	2.16	0.51	2.00	0.99	.....
Little Forks	0.99	0.70	0.70	8.14	7.60	5.60	6.20	9.35	1.93	0.16	0.63	0.50	42.50
Pokegama Falls	.....	.....	1.21	2.69	5.12	1.35	.....	3.55	1.20	0.28	1.38	0.24	.....
Winnibigoshish	0.54	0.65	2.23	2.87	4.99	1.32	1.79	2.64	2.40	0.21	1.22	0.12	20.98
St. Vincent	0.36	0.44	0.80	1.66	2.22	2.28	1.70	4.14	1.30	0.28	0.16	* T	15.34
Winnipeg	0.53	0.60	1.60	2.55	1.85	1.40	3.57	3.73	0.86	0.84	2.26	0.10	19.89

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	0.6	0.7	1.0	2.7	4.4	2.4	3.2	6.0	1.9	0.8	1.3	0.4	25.4
Lower Rainy	0.5	0.6	1.2	2.7	4.5	2.0	2.5	4.4	1.7	0.3	1.1	0.3	21.8
Lake of Woods	0.5	0.5	0.9	2.4	3.0	2.2	3.2	5.0	1.2	0.6	1.1	0.2	20.8

* T denotes trace.

TABLE 1—Continued

MONTHLY PRECIPITATION ON OR NEAR WATERSHED

RECORDS OF U. S. WEATHER BUREAU AND CANADIAN METEOROLOGICAL SERVICE

1893

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Port Arthur	1.36	2.02	0.92	3.09	0.79	3.98	1.39	2.02	3.39	2.60	0.51	1.08	23.15
Savanne	1.50	2.00	1.20	1.60	0.95	4.36	3.53	2.62	0.86	1.07	0.70	1.80	22.19
Duluth	1.06	1.64	2.28	3.64	2.31	1.59	3.76	1.51	1.04	1.84	0.76	1.91	23.34
Fort Frances	1.50	1.15	1.84	4.00	2.37	4.91	5.09	1.64	2.16	2.40	1.17	1.03	29.26
Little Forks	1.47	2.35	3.21	5.30	2.41	.....	.....	.....	.....	.....	.....	.....	.....
Pokegama Falls	1.62	1.39	1.35	2.87	2.17	3.22	5.70	4.04	1.23	0.69	0.92	1.04	26.24
Winnibigoshish	0.92	1.25	1.51	2.90	2.60	1.86	4.48	5.46	1.80	1.09	1.32	0.72	25.91
St. Vincent	1.50	1.00	0.45	2.56	2.00	5.20	2.16	2.48	1.30	0.76	0.52	0.30	20.23
Winnipeg	1.88	1.52	0.22	2.30	2.23	3.87	5.42	1.52	0.66	1.35	2.34	0.62	23.93

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	1.5	1.7	1.5	2.7	1.9	4.0	4.5	2.6	1.4	1.3	1.0	1.1	25.2
Lower Rainy	1.4	1.4	1.4	3.2	2.4	4.0	4.7	3.2	1.6	1.3	0.9	0.8	26.3
Lake of Woods	1.5	1.4	1.0	2.7	2.2	4.6	4.0	1.9	1.2	1.3	1.1	0.8	23.7

1894

Port Arthur	0.93	0.04	1.53	2.26	2.73	1.16	3.24	1.17	1.77	5.27	1.26	1.16	22.52
Savanne	* T	0.70	0.70	3.76	2.58	3.40	2.91	1.42	3.98	5.15	1.70	0.90	27.20
Barclay	.....	.....	.....	0.18	2.40	.....	1.60	3.40	2.40	.....	.....	0.98	.....
Duluth	1.51	0.25	4.30	5.85	5.62	1.80	0.92	1.08	2.08	4.99	1.43	1.87	31.70
Mount Iron	1.35	0.13	3.83	4.75	3.89	4.98	1.67	0.94	4.64	5.69	1.54	1.32	34.73
Tower	.....	0.19	2.29	5.31	2.71	3.36	0.93	.....	.....	.....	.....	.....	.....
Fort Frances	0.72	0.02	2.55	4.19	.....	.....	.....	.....	0.43	.....	.....	.....	.....
Pokegama Falls	1.11	0.21	3.80	4.35	4.21	5.79	0.36	1.89	3.57	4.52	0.92	1.28	32.01
Winnibigoshish	0.86	0.15	3.07	3.92	2.72	3.97	0.49	0.88	2.50	3.43	0.80	0.71	23.50
Roseau	.....	.....	1.95	3.46	2.71	2.91	0.76	0.48	1.88	2.21	0.97	0.42	.....
St. Vincent	0.80	0.66	1.20	4.42	1.64	3.38	0.49	2.18	1.08	3.00	0.73	0.71	20.29
Winnipeg	1.16	1.00	1.63	3.56	0.58	2.40	0.63	0.77	2.18	1.79	1.87	0.55	18.12

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	1.0	0.4	2.1	4.3	2.8	3.6	1.8	1.3	3.2	4.9	1.5	0.9	27.8
Lower Rainy	0.8	0.4	2.5	4.3	2.7	3.8	1.2	1.8	2.8	3.8	1.0	1.0	26.1
Lake of Woods	0.9	0.5	1.9	3.9	1.8	2.9	1.1	1.3	2.1	3.0	1.4	0.7	21.5

1895

Port Arthur	0.71	0.75	0.96	2.60	2.58	2.89	3.01	1.96	4.27	1.20	0.58	0.96	22.47
Savanne	1.00	0.40	0.60	2.58	3.37	4.40	3.34	3.01	3.80	2.01	1.91	2.20	28.62
Barclay	1.40	1.00	0.80	0.83	1.50	3.80	1.70	1.90	2.60	.....	1.05	.....	.....
Duluth	0.75	0.48	0.48	0.73	2.13	4.62	3.03	1.67	5.96	0.09	1.65	0.71	22.30
Mount Iron	0.75	0.93	0.26	2.32	6.09	6.48	8.36	3.29	5.28	0.50	1.37	0.47	36.10
Tower	.....	.....	.....	.....	.....	.....	3.33	1.22	3.97	0.90	2.10	0.40	.....
Koochiching	.....	.....	0.40	3.38	3.55	6.10	2.60	1.90	1.19	0.60	1.79	1.07	.....
Fort Frances	.....	.....	.....	.....	.....	.....	2.79	2.54	2.00	1.21	1.30	0.80	.....
Pokegama Falls	0.61	0.39	0.00	1.54	5.32	6.28	3.65	2.56	3.99	0.18	1.53	0.48	26.53
Winnibigoshish	0.31	0.41	0.08	0.79	3.51	8.63	4.13	3.57	3.16	0.28	0.77	0.30	25.94
Roseau	.....	.....	.....	1.71	1.70	7.54	.....	.....	3.44	0.88	1.13	.....	.....
St. Vincent	0.77	0.44	0.20	1.75	3.46	4.15	3.36	2.61	1.20	0.74	1.21	0.71	20.60
Winnipeg	1.54	1.18	0.55	0.62	3.74	2.31	3.30	1.01	1.14	0.33	0.95	1.75	18.42

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	0.8	0.6	0.4	2.6	4.1	5.2	3.3	2.4	3.0	1.1	1.7	1.3	26.5
Lower Rainy	0.6	0.4	0.2	2.1	3.9	6.9	3.7	2.5	3.2	0.6	1.4	0.7	26.2
Lake of Woods	0.9	0.5	0.4	1.6	3.0	5.1	2.6	2.0	2.8	0.7	1.3	1.0	21.9

* T denotes trace.

TABLE 1—Continued

MONTHLY PRECIPITATION ON OR NEAR WATERSHED

RECORDS OF U. S. WEATHER BUREAU AND CANADIAN METEOROLOGICAL SERVICE

1896

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Port Arthur	0.55	0.21	0.76	3.00	4.10	2.04	1.75	1.73	1.41	3.15	2.62	0.16	21.48
Savanne	0.50	2.10	0.60	1.50	3.45	3.07	4.79	4.65	4.25	1.80	1.90	0.50	29.11
Barclay	0.80	0.90	1.50	1.10	.....	1.60	.....	2.55	0.70	0.30	0.90	.....	.....
Duluth	1.30	0.19	1.59	4.06	5.18	2.00	1.74	2.41	1.00	3.46	3.42	0.84	27.19
Mount Iron	1.55	0.42	1.85	5.60	6.81	2.51	4.39	4.85	2.69	4.90	2.20	1.70	39.47
Tower	1.10	1.05	1.35	2.70	5.80	2.95	4.20	4.30	1.90	1.55	2.00	0.60	29.50
Koochiching	.....	0.50	2.13	1.91	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fort Frances	0.70	0.60	2.05	2.38	5.19	2.32	3.13	3.32	1.37	.....	.....	.....	.....
Pokegama Falls	0.88	0.20	1.40	5.66	7.26	3.13	2.39	2.42	1.72	3.79	2.69	1.04	32.58
Winnibigoshish	0.83	0.30	0.90	4.55	8.19	3.57	1.81	4.00	2.67	2.86	2.49	0.79	32.96
Roseau	0.75	0.87	1.34	4.34	6.31	3.25	0.62	2.25	1.44	.....	2.40	0.68	.....
Winnipeg	1.03	0.42	1.85	5.64	5.32	3.96	2.01	1.51	1.96	1.01	1.31	0.27	26.29

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	0.9	0.9	1.4	2.2	5.3	3.1	3.7	4.0	1.9	2.0	2.0	0.7	28.1
Lower Rainy	0.9	0.5	1.5	3.9	6.4	3.2	2.3	3.3	2.0	2.5	2.4	0.9	29.8
Lake of Woods	0.8	0.6	1.5	3.6	5.9	3.3	2.0	2.6	1.4	1.5	2.2	0.6	26.0

1897

Port Arthur	1.43	0.92	0.81	0.64	2.06	3.39	6.53	4.65	1.12	1.44	1.06	0.46	24.51
Savanne	0.50	1.40	1.00	0.30	1.60	1.75	6.05	5.40	1.30	1.20	1.40	1.20	23.10
Duluth	1.48	2.21	1.34	0.72	1.63	3.48	9.29	3.91	3.14	2.11	0.78	0.85	30.94
Mount Iron	3.30	3.00	0.70	0.20	.....	3.27	8.75	4.38	2.12	2.24	.....	.....	.....
Tower	1.92	1.90	1.50	0.70	1.60	3.00	9.50	4.65	1.60	2.05	1.30	1.00	30.72
Koochiching	.....	2.35	2.55	0.28	.....	.....	6.18	2.41	0.20	2.12	0.73	0.71	.....
Pokegama Falls	1.74	1.73	2.15	1.63	1.50	5.01	7.53	3.37	1.29	1.27	0.35	0.67	28.24
Winnibigoshish	2.30	1.62	1.58	1.03	1.13	4.82	9.87	2.32	0.61	1.27	0.40	0.60	27.55
Roseau	2.25	1.14	1.16	0.24	1.36	2.04	6.58	.....	.....	1.57	0.77	0.57	.....
Winnipeg	0.89	0.89	1.58	1.01	1.59	2.31	5.38	1.00	0.34	1.33	0.72	0.55	17.59

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	1.3	1.9	1.5	0.3	1.6	2.9	7.0	3.9	1.0	1.7	1.1	1.0	25.2
Lower Rainy	2.1	1.9	1.6	0.5	1.5	3.6	7.6	3.0	0.9	1.7	0.8	0.7	25.9
Lake of Woods	1.4	1.5	1.5	0.5	1.5	2.5	6.5	2.4	0.4	1.5	0.7	0.6	20.0

1898

Port Arthur	0.51	0.46	0.87	0.07	3.06	6.94	4.58	2.42	5.40	2.78	0.77	0.28	28.14
Savanne	0.80	1.80	1.40	0.00	1.30	8.05	6.85	2.40	6.60	2.70	2.00	0.60	34.50
Duluth	0.38	0.89	0.75	0.41	3.30	3.52	1.33	3.39	1.21	3.39	0.94	0.19	19.70
Mount Iron	1.05	0.60	0.40	.....	2.40	8.28	5.88	3.40	2.78	3.85	1.00	0.40	.....
Tower	0.80	1.10	1.45	0.80	5.70	7.50	6.00	1.50	2.95	3.01	1.70	0.60	33.11
Koochiching	0.33	0.46	0.77	0.75	2.38	7.73	5.78	1.60	4.56	2.43	0.98	0.20	27.97
Pokegama Falls	0.27	0.57	1.14	0.62	3.19	5.57	5.40	4.01	2.10	2.58	1.46	0.64	27.55
Winnibigoshish	0.09	0.55	1.19	1.00	2.96	5.62	3.88	2.80	3.83	2.10	0.79	0.20	25.01
Roseau	0.22	0.72	1.03	0.94	0.89	.....	.....	1.32	1.39	.....	.....	0.32	.....
New Folden	0.25	.....	1.40	0.89	1.74	5.27	7.15	1.11	2.10	2.18	0.77	0.34	.....
Pembina	.....	.....	.....	.....	0.95	5.51	1.36	2.15	2.57	.....	.....	.....	.....
Winnipeg	0.89	1.07	2.56	0.98	0.89	6.10	1.77	2.15	2.50	5.67	2.00	0.61	27.19

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	0.6	0.8	1.0	0.6	2.4	7.7	6.0	2.2	4.3	2.9	1.5	0.4	30.4
Lower Rainy	0.4	0.7	1.0	0.8	2.6	6.8	5.0	2.2	3.0	2.7	1.1	0.3	26.6
Lake of Woods	0.5	0.8	1.4	1.0	1.4	6.5	4.0	2.0	3.0	2.7	1.4	0.4	25.1

TABLE 1—Continued

MONTHLY PRECIPITATION ON OR NEAR WATERSHED

RECORDS OF U. S. WEATHER BUREAU AND CANADIAN METEOROLOGICAL SERVICE

1899

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Port Arthur	0.50	0.57	0.34	2.57	3.40	3.84	3.52	3.76	3.65	1.79	1.34	1.25	26.53
Savanne	1.50	0.00	1.00	0.75	0.13	1.50	2.26	4.20	3.70	2.00	0.30	0.30	17.64
Duluth	0.67	0.66	0.82	1.33	4.66	7.10	1.82	6.18	2.05	3.54	0.61	1.18	30.62
Mount Iron	0.24	0.50	0.87	1.68	5.79	6.24	5.14	4.56	4.34	3.77	0.86	1.40	35.39
Tower	0.90	1.80	1.30	2.00	3.20	6.40	6.30	5.40	3.55	3.20	0.60	1.15	35.80
Pokegama Falls	0.75	0.52	0.58	2.13	7.21	6.81	3.70	8.13	2.83	3.45	0.47	0.65	37.23
Winnibigoshish	0.57	0.36	0.87	1.78	5.08	7.21	5.29	6.03	3.79	2.82	0.18	0.63	34.61
Hallock	.....	.....	.....	.....	.....	.....	3.35	2.47	0.21	1.22	0.36	0.23	.....
Roseau	.....	0.18	.....	.....	1.74	1.64	6.60	1.28	0.92	.....	0.91	.....	.....
Pembina	.....	.....	.....	1.64	1.29	2.09	4.40	1.81	0.90	1.17	0.35	0.36	.....
Kenora	.....	.....	.....	.....	.....	.....	.....	.....	0.47	1.82	0.58	0.56	.....
Winnipeg	1.77	0.84	0.36	2.17	2.20	3.68	1.96	3.42	0.91	1.85	0.55	0.11	19.82

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	1.0	0.5	0.9	1.5	3.0	4.2	3.6	4.3	3.4	2.5	0.5	0.7	26.1
Lower Rainy	0.8	0.5	0.8	1.9	4.1	5.1	4.5	4.7	2.6	2.8	0.5	0.7	29.0
Lake of Woods	1.2	0.4	0.8	1.8	2.0	2.7	3.0	3.0	1.2	1.9	0.5	0.5	19.0

1900

Port Arthur	0.85	0.20	0.29	0.50	0.36	2.48	3.33	6.77	6.14	5.20	0.67	0.30	27.09
Savanne	1.30	0.00	0.60	0.20	0.60	2.60	3.11	5.91	5.12	.....	.....	.....	.....
Duluth	0.71	0.28	0.94	0.39	0.62	1.05	3.94	6.15	4.80	3.07	0.54	0.65	23.14
Mount Iron	0.62	0.21	0.15	0.55	1.78	0.60	3.22	10.14	10.03	3.50	0.40	0.30	31.50
Tower	1.00	0.50	0.30	0.80	0.60	2.50	3.10	5.40	6.41	0.67	0.70	0.60	22.58
Koochiching	.....	.....	0.20	0.65	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pokegama Falls	0.55	0.31	0.39	0.44	1.10	0.58	3.65	9.85	6.79	4.20	0.78	0.71	29.35
Winnibigoshish	0.81	0.43	0.26	0.45	0.87	1.53	7.10	10.63	9.40	3.27	0.61	0.66	36.02
Hallock	0.48	0.41	0.85	0.82	0.25	1.87	2.21	4.83	15.30	2.55	1.02	0.16	30.75
Pembina	0.90	0.46	0.64	1.79	0.41	0.90	2.05	3.92	5.65	2.94	1.02	0.38	21.06
Kenora	1.70	0.62	0.30	0.57	0.31	1.54	4.58	7.33	5.09	3.46	1.25	1.20	27.95
Winnipeg	1.05	0.20	0.68	0.30	0.11	1.85	4.06	3.66	4.22	0.94	0.84	0.67	18.58

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	1.0	0.3	0.4	0.5	0.7	1.9	3.3	6.7	6.2	3.3	0.7	0.5	25.5
Lower Rainy	0.8	0.4	0.4	0.6	0.7	1.6	3.4	7.3	6.6	3.3	0.8	0.5	26.4
Lake of Woods	1.1	0.4	0.5	0.6	0.5	1.5	4.0	6.5	5.5	3.4	1.1	0.7	25.8

1901

Port Arthur	0.84	0.06	0.66	1.57	0.95	3.76	6.24	2.92	1.98	2.47	0.71	0.35	22.51
Savanne	.....	.....	.....	.....	.....	4.10	4.65	3.95	2.35	2.00	2.10	0.90	.....
Duluth	0.36	0.72	1.95	1.23	0.97	9.09	4.39	1.70	2.30	2.01	1.28	0.68	26.68
Mount Iron	0.15	0.30	3.20	1.35	1.60	8.99	4.17	1.91	3.06	3.35	1.50	0.57	30.15
Tower	0.75	0.40	2.80	1.00	2.00	7.73	3.00	1.70	2.20	1.50	0.90	0.95	24.93
Pokegama Falls	0.26	0.28	4.11	1.94	1.14	9.27	5.09	1.49	1.31	2.67	1.44	0.64	29.64
Winnibigoshish	0.23	0.38	2.36	1.75	0.73	8.49	3.82	1.67	1.75	4.53	0.43	0.60	26.74
Warroad	.....	.....	0.63	2.04	0.60	5.00	1.63	3.95	2.58	.....	0.50	0.40	.....
Hallock	0.17	0.44	1.19	1.45	0.05	5.67	3.77	3.24	2.19	1.81	0.11	0.56	20.65
Pembina	0.60	0.36	0.34	1.11	0.12	4.60	3.03	2.25	2.59	0.95	0.08	0.47	16.50
Kenora	2.25	0.55	0.75	0.04	1.47	3.88	2.93	2.53	1.70	0.82	0.60	1.10	18.62
Winnipeg	0.81	0.90	0.26	1.93	0.36	10.07	3.12	1.70	3.80	0.46	0.06	0.43	23.90

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	0.5	0.3	1.6	1.3	1.2	5.9	4.0	3.0	2.3	2.2	1.2	0.8	24.3
Lower Rainy	0.3	0.3	1.9	1.5	1.0	7.0	3.3	2.6	2.2	2.5	0.8	0.6	24.0
Lake of Woods	0.9	0.4	0.8	1.0	1.0	4.8	2.9	3.2	2.0	1.5	0.6	0.8	19.9

TABLE 1—Continued

MONTHLY PRECIPITATION ON OR NEAR WATERSHED

RECORDS OF U. S. WEATHER BUREAU AND CANADIAN METEOROLOGICAL SERVICE

1902

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Port Arthur	0.50	0.26	0.40	0.55	1.89	5.18	3.03	3.01	1.99	2.78	1.77	0.46	21.82
Savanne	1.40	*T.	1.05	2.10	3.30	2.85	2.10	4.35	2.90	2.80	1.85	1.90	26.60
Duluth	0.74	0.70	0.77	1.09	3.89	3.68	4.54	3.30	1.52	2.03	1.85	2.03	26.14
Mount Iron	0.20	0.20	1.01	1.09	6.08	3.44	4.76	5.25	2.52	2.40	2.13	2.05	31.13
Tower	0.70	0.20	0.52	1.30	7.50	2.00	1.90	4.20	4.90	2.70	2.40	1.80	30.12
Pokegama Falls	0.55	0.62	1.20	1.20	5.03	2.44	3.04	5.45	1.76	1.97	2.55	1.32	27.13
Winnibigoshish	0.34	0.37	0.51	1.07	5.59	2.33	3.38	5.89	0.85	1.20	1.51	1.06	24.10
Hallock	0.10	0.65	2.90	0.39	4.13	3.12	4.39	1.72	1.76	1.57	0.56	0.18	21.47
Pembina	0.12	.....	.....	1.01	4.75	3.79	3.36	1.34	1.53	1.33	0.49	0.50	.....
Kenora	0.13	0.48	1.22	1.05	0.84	5.76	3.00	2.04	2.06	1.40	0.70	1.38	20.06
Winnipeg	0.12	0.54	2.88	1.33	3.87	3.46	1.33	0.93	2.01	1.23	1.02	1.50	20.22

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	0.5	0.2	1.0	1.4	4.6	2.9	2.8	4.0	2.9	2.4	1.7	1.7	26.1
Lower Rainy	0.3	0.4	1.2	1.1	4.9	2.8	3.4	3.8	2.2	1.8	1.5	1.4	24.9
Lake of Woods	0.2	0.5	1.4	1.1	4.0	3.3	3.4	2.4	2.0	1.5	0.9	1.1	21.8

1903

Port Arthur	0.23	0.29	0.95	1.81	3.17	1.60	3.29	1.97	5.56	2.71	0.35	0.18	22.11
Savanne	1.70	1.00	0.30	1.10	0.70	1.20	5.65	1.50	3.70	3.85	1.35	0.80	22.85
Duluth	0.83	0.67	1.87	2.16	3.54	0.79	3.50	3.80	4.76	3.84	0.95	1.30	28.01
Mount Iron	1.15	1.07	0.48	1.55	3.87	1.63	3.21	3.64	7.45	5.16	1.96	2.73	33.90
Tower	0.80	1.10	1.55	2.60	3.80	1.30	3.20	4.30	5.90	5.00	1.20	0.67	31.42
Pokegama Falls	0.42	0.98	0.72	2.85	4.43	1.30	2.67	4.53	5.90	3.65	1.10	1.22	29.77
Winnibigoshish	0.93	0.67	0.79	2.60	4.00	1.20	1.14	4.93	4.78	2.89	0.95	1.02	25.90
Hallock	0.94	0.02	0.88	1.55	2.30	2.55	2.20	3.81	4.17	1.46	0.62	1.59	22.09
Pembina	0.53	0.16	0.66	1.41	3.42	2.54	1.87	4.09	4.48	0.95	0.65	0.88	21.64
Kenora	1.10	0.55	1.30	1.05	3.64	1.58	2.17	3.66	4.56	1.42	1.00	1.28	23.31
Winnipeg	0.28	0.10	1.08	0.54	3.40	0.49	3.05	2.00	2.77	0.69	1.50	1.02	16.92

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	1.1	0.8	0.7	1.7	2.7	1.4	3.4	3.4	4.9	3.7	1.3	1.2	26.3
Lower Rainy	0.8	0.7	0.9	2.0	3.7	1.6	2.4	4.0	5.2	3.1	1.1	1.3	26.8
Lake of Woods	0.9	0.5	1.0	1.4	3.3	1.8	2.5	3.6	4.4	1.8	0.9	1.2	23.3

1904

Port Arthur	0.23	0.18	1.14	0.36	2.37	3.36	2.94	2.65	3.41	3.62	0.58	1.43	22.27
Savanne	1.30	0.90	1.50	0.30	4.25	2.80	4.75	3.40	3.95	1.00	0.90	0.60	25.65
Duluth	0.20	1.25	1.67	0.50	1.48	3.78	3.82	2.47	3.48	4.66	0.24	0.90	24.45
Mount Iron	0.50	1.40	3.72	0.42	1.35	2.83	4.55	2.47	3.91	2.66	0.60	2.61	27.02
Tower	0.10	0.30	2.10	1.34	1.95	5.60	.....	.....	.....	.....	.....	.....	.....
Pokegama Falls	0.13	1.26	1.96	1.03	1.06	2.46	4.76	1.39	4.49	2.75	0.36	1.01	22.66
Winnibigoshish	0.35	1.11	2.33	0.92	1.34	2.16	4.39	2.91	4.72	1.47	0.27	0.81	22.78
Hallock	0.18	0.86	2.61	1.23	1.95	5.12	4.54	1.63	1.66	0.39	0.32	0.25	20.74
Pembina	0.29	0.70	2.24	1.09	3.27	8.15	5.86	2.95	1.59	0.69	0.39	0.59	27.81
Kenora	0.48	0.83	2.30	0.81	1.78	2.50	5.33	1.67	3.27	0.81	0.63	2.12	22.53
Winnipeg	0.17	0.85	3.00	0.46	1.77	4.22	5.55	1.62	1.88	1.51	0.32	1.65	23.00

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	0.4	0.9	2.2	0.7	2.1	3.2	4.7	2.5	3.8	1.7	0.5	1.3	24.0
Lower Rainy	0.3	0.9	2.4	0.9	1.6	3.3	4.7	2.0	3.7	1.8	0.4	1.2	23.2
Lake of Woods	0.3	0.8	2.3	1.0	1.8	3.2	5.0	2.0	3.2	1.0	0.4	1.3	22.3

* T denotes trace.

TABLE 1—Continued

MONTHLY PRECIPITATION ON OR NEAR WATERSHED

RECORDS OF U. S. WEATHER BUREAU AND CANADIAN METEOROLOGICAL SERVICE

1905

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Port Arthur	0.22	0.29	1.43	1.32	2.14	2.36	7.33	1.30	4.58	2.34	2.70	0.10	26.11
Savanne	0.00	1.20	4.60	1.44	1.45	3.25	5.41	1.20	4.50	1.80	2.80	0.20	27.85
Duluth	0.78	0.42	1.05	1.97	2.46	8.75	4.02	3.55	7.72	2.49	2.49	0.07	35.77
Mount Iron	0.45	0.15	1.61	3.97	3.70	7.45	9.44	4.23	7.61	2.55	1.47	0.20	42.83
Pokegama Falls	0.47	0.08	1.78	3.07	4.53	9.16	5.80	3.45	4.00	2.73	2.39	0.30	37.76
Winnibigoshish	0.46	0.28	1.07	2.49	4.30	7.77	7.65	2.66	4.60	2.81	2.53	0.00	36.62
Hallock	0.52	0.15	2.40	0.44	4.50	4.65	3.03	5.31	2.88	0.20	1.17	0.35	25.60
Pembina	0.68	0.26	2.02	0.39	4.09	4.46	0.92	2.33	1.54	0.69	0.75	0.57	18.70
Kenora	0.15	0.62	1.25	0.04	2.24	5.55	3.51	4.18	3.69	2.45	1.41	0.15	25.24
Winnipeg	0.20	0.27	1.78	0.38	3.35	4.62	4.35	1.41	1.56	1.03	1.13	0.41	20.49

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	0.4	0.4	1.9	2.0	2.6	5.5	6.0	3.0	4.6	2.2	1.9	0.2	30.7
Lower Rainy	0.4	0.2	1.7	1.8	3.9	6.6	6.0	3.8	4.3	2.1	1.8	0.2	32.8
Lake of Woods	0.3	0.3	1.6	0.7	3.1	5.5	4.2	3.7	3.5	2.0	1.4	0.2	26.5

1906

Port Arthur	0.45	0.52	0.55	0.60	2.97	5.88	3.60	2.34	1.15	2.18	4.29	0.55	25.08
Duluth	1.78	0.30	0.95	1.51	3.38	7.05	0.97	3.95	3.66	2.34	1.68	1.21	28.78
Savanne	0.50	.....	0.80	1.10	3.35	3.50	2.55	.....	.....	.....	.....	.....	.....
Mount Iron	0.32	0.01	0.91	0.86	5.83	3.93	3.32	3.14	5.47	1.28	.....	1.50	.....
Stevens Mine	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.40	.....
International Falls†	.....	.....	.....	.....	.....	.....	.....	0.53	1.25	.....	.....	.....	.....
Pokegama Falls	1.30	0.15	1.10	1.32	4.63	4.09	0.67	4.53	3.15	2.13	2.73	0.87	26.67
Winnibigoshish	0.96	0.12	0.91	1.71	3.59	4.07	1.73	4.31	2.31	1.42	3.49	1.64	26.26
Hallock	0.60	0.10	0.23	1.03	2.74	4.22	2.81	1.81	0.87	0.45	2.15	1.40	18.41
Pembina	1.25	0.40	0.15	0.90	2.70	4.19	3.16	2.51	1.12	0.54	2.49	1.80	21.21
Kenora	1.40	0.75	0.10	.....	3.90	4.84	1.12	6.65	0.90	0.20	1.35	1.50	.....
Winnipeg	1.33	0.21	0.54	1.64	2.97	6.30	3.37	1.33	1.51	0.21	1.87	1.26	22.54

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	0.6	0.3	0.6	1.0	4.2	4.0	2.7	3.4	2.2	1.4	2.8	1.2	24.4
Lower Rainy	0.7	0.2	0.6	1.2	4.2	4.1	2.3	3.1	2.3	1.2	2.7	1.3	23.9
Lake of Woods	1.0	0.3	0.3	1.3	3.7	4.5	1.5	4.6	1.3	0.5	2.1	1.5	22.6

1907

Port Arthur	1.03	0.80	1.63	1.01	0.88	0.74	5.94	5.06	3.26	2.47	1.05	0.02	23.89
Duluth	1.07	0.71	1.56	0.92	1.60	1.59	3.41	4.28	6.71	0.95	0.53	0.54	23.87
Mount Iron	2.70	0.80	1.15	1.40	2.09	2.35	1.88	2.47	3.62	1.20	0.38	0.55	20.59
Stephens Mine	.....	.....	.....	.....	.....	.....	2.66	3.62	3.63	0.84	0.35	0.12	.....
International Falls	.....	.....	.....	.....	.....	.....	.....	5.20	1.86	.....	.....	.....	.....
Pokegama Falls	1.00	0.17	1.02	1.53	2.57	2.81	3.17	3.05	3.09	1.34	0.65	0.57	20.97
Winnibigoshish	1.34	0.36	1.21	1.18	2.23	3.58	4.35	3.85	3.24	1.12	0.84	0.58	23.88
Blackduck	.....	0.10	0.68	1.15	0.89	2.94	3.20	.....	2.42	2.83	0.29	0.40	.....
Hallock	2.35	0.52	0.33	0.90	0.39	2.72	3.27	3.40	2.03	0.56	0.15	0.10	16.72
Pembina	1.95	0.37	1.42	1.61	1.05	2.39	2.85	2.78	1.30	0.39	*T	0.20	16.31
Kenora	2.50	0.55	1.38	1.10	0.40	2.78	5.10	6.45	3.25	0.65	0.90	0.25	25.31
Winnipeg	2.12	0.27	1.12	0.99	0.97	1.54	3.98	3.90	0.69	0.40	0.72	0.18	16.88

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	1.8	0.6	1.3	1.3	1.4	2.3	3.9	4.4	3.0	1.3	0.7	0.3	22.3
Lower Rainy	1.8	0.4	1.0	1.2	1.6	2.6	3.4	3.8	2.7	1.2	0.6	0.3	20.6
Lake of Woods	2.2	0.5	1.1	1.1	0.7	2.8	4.3	4.8	2.7	0.9	0.6	0.2	21.9

*T denotes trace.

† Formerly known as Koochiching.

TABLE 1—Continued

MONTHLY PRECIPITATION ON OR NEAR WATERSHED

RECORDS OF U. S. WEATHER BUREAU AND CANADIAN METEOROLOGICAL SERVICE

1908

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Port Arthur	0.47	1.67	0.57	2.82	2.85	3.70	1.96	3.71	1.08	1.00	1.99	2.73	24.55
Duluth	0.33	1.14	1.54	2.07	5.73	4.48	5.34	2.10	3.55	2.97	1.32	0.48	31.05
Mount Iron	0.21	1.37	1.90	2.18	4.98	5.61	3.90	1.06	1.72	1.02	0.62	1.44	26.01
Stephens Mine	0.16	0.60	1.08	2.12	5.04	6.39	4.28	1.31	1.36	0.72	0.71	0.49	24.26
International Falls	0.02	1.60	.....	.....	.....	4.59	2.01	2.98	1.75	1.79	.....	1.15	.....
Pokegama Falls	0.32	1.03	1.48	1.48	6.03	4.66	3.95	0.90	2.19	1.31	1.21	0.38	24.94
Winnibigoshish	0.31	1.20	1.59	1.53	4.31	4.18	2.95	1.23	2.49	1.19	1.25	0.45	22.68
Blackduck	0.14	1.02	1.06	2.42	4.95	5.38	3.30	1.77	3.03	0.57	1.16	0.83	25.63
Hallock	0.20	1.46	1.07	1.75	4.44	3.03	2.09	7.56	0.34	1.79	0.49	0.37	24.59
Pembina	0.30	2.20	1.40	1.60	3.39	2.53	0.30	3.07	1.24	1.84	0.72	0.82	19.41
Kenora	0.30	1.20	0.60	1.05	.....	.....	.....	.....	.....	.....	.....	0.50	.....
Winnipeg	0.44	1.80	1.83	1.75	3.01	3.11	1.76	2.44	1.89	2.21	0.55	0.65	21.44

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	0.2	1.4	1.0	2.0	3.8	4.5	2.7	2.7	1.5	1.3	1.0	1.1	23.2
Lower Rainy	0.2	1.2	1.3	1.7	4.6	4.6	2.9	2.3	1.8	1.4	0.8	0.7	23.5
Lake of Woods	0.3	1.2	0.9	1.4	3.5	3.7	2.0	2.8	1.8	1.8	0.6	0.6	20.6

1909

Port Arthur	1.20	0.56	0.66	0.64	1.20	0.57	5.17	3.05	2.61	1.49	2.63	1.20	20.98
Duluth	1.02	1.34	0.78	2.15	1.87	1.33	10.83	4.91	3.28	2.15	2.16	1.83	33.65
Mount Iron	1.65	1.35	1.18	1.33	2.56	1.69	5.17	8.13	4.00	2.35	1.32	1.33	32.06
Stephens Mine	1.68	1.09	0.74	1.06	2.55	1.21	5.86	7.78	3.11	2.33	1.52	1.24	30.17
International Falls	1.77	*T	0.92	0.84	2.84	2.30	2.42	6.08	2.93	5.49	1.70	1.90	29.19
Pokegama Falls	1.37	1.07	0.65	1.61	0.88	1.00	3.45	6.33	4.57	1.38	1.20	1.22	24.73
Winnibigoshish	1.33	0.64	0.43	1.39	1.33	0.82	5.00	7.24	2.48	2.32	1.87	1.18	26.03
Kelliher	.....	0.26	0.77	1.66	1.69	1.19	3.80	6.24	2.08	4.07	1.73	1.41	.....
Baudette	1.19	0.19	0.72	0.47	1.80	2.52	6.46	2.88	4.69	4.12	1.65	1.23	27.92
Warroad	.....	.....	.....	.....	.....	.....	2.88	1.66	4.15	0.79	1.65	.....	.....
Roseau	0.62	0.36	0.71	0.34	3.22	2.92	3.75	2.26	3.14	0.92	2.28	1.44	22.92
Hallock	0.38	0.10	0.73	0.59	4.60	4.70	2.68	2.12	0.82	0.53	0.28	1.12	18.65
Pembina	0.80	0.10	0.80	0.77	4.85	4.66	1.90	1.43	1.66	0.62	0.02	2.90	20.51
Kenora	.....	.....	0.85	.....	.....	.....	.....	.....	.....	2.00	1.60	3.82	.....
Winnipeg	0.73	0.76	2.67	1.58	1.25	1.54	3.84	4.75	0.60	0.52	0.89	3.99	23.12

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	1.5	0.6	0.8	1.0	2.0	1.5	4.4	5.5	2.8	2.6	1.8	1.7	26.2
Lower Rainy	1.3	0.5	0.7	1.0	2.2	1.8	4.3	5.5	3.6	3.0	1.6	1.3	26.8
Lake of Woods	1.0	0.3	0.8	0.8	2.3	2.2	3.9	4.0	3.0	2.7	1.6	2.5	25.1

1910

Port Arthur	0.71	0.79	0.23	1.62	0.76	0.54	2.85	1.47	3.42	2.46	1.29	0.41	16.55
Duluth	0.80	1.13	0.44	1.40	1.18	0.11	3.89	2.41	4.20	0.81	1.18	0.56	18.11
Mount Iron	0.45	0.79	0.16	2.67	1.41	0.35	4.60	1.04	3.83	1.41	1.07	0.61	18.39
Stephens Mine	0.33	0.50	0.24	1.38	2.17	0.45	5.29	1.45	3.37	1.12	1.03	0.45	17.78
International Falls	0.50	0.60	.....	2.38	1.32	1.63	2.12	1.20	2.47	3.47	1.45	1.30	.....
Little Fork	.....	.....	.....	2.73	0.67	1.15	2.24	1.34	2.10	3.33	1.29	0.58	.....
Pokegama Falls	0.32	0.61	0.29	*1.49	2.20	1.68	5.76	2.36	3.93	0.51	0.89	1.21	21.25
Winnibigoshish	0.42	0.57	0.23	2.10	1.90	0.84	3.39	0.53	4.10	1.10	1.07	0.91	17.16
Kelliher	0.20	.....	.....	.....	.....	1.29	2.15	0.55	2.28	1.87	0.52	1.02	.....
Baudette	0.16	0.35	0.96	1.78	1.26	1.33	1.37	1.06	1.58	.....	.....	.....	.....
Warroad	0.08	0.38	0.86	1.51	3.44	1.67	1.37	2.25	3.24	1.63	0.78	0.86	18.07
Roseau	*T	0.40	1.41	2.27	1.21	2.18	1.16	2.64	1.95	1.52	0.70	0.88	16.32
Hallock	0.10	0.37	1.80	1.88	1.45	1.07	0.80	2.64	3.20	1.75	0.42	0.67	16.15
Pembina	0.00	0.30	0.95	3.41	1.46	0.94	1.05	1.32	2.96	1.10	0.35	0.40	14.24
Kenora	0.10	0.30	3.30	3.30	1.30	0.26	0.50	1.25	3.80	2.60	2.05	0.90	19.66
Winnipeg	0.25	1.56	1.65	1.49	1.65	2.38	0.80	2.11	2.75	1.08	1.27	1.87	18.89

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	0.4	0.6	0.4	2.2	1.3	0.7	3.3	1.3	3.2	2.4	1.2	0.6	17.6
Lower Rainy	0.3	0.5	0.5	1.9	1.8	1.2	3.0	1.3	3.0	1.9	0.9	0.7	17.0
Lake of Woods	0.2	0.4	1.6	2.4	1.7	0.9	1.1	1.5	3.1	2.6	1.2	0.8	17.5

* T denotes trace.

TABLE 1—Continued

MONTHLY PRECIPITATION ON OR NEAR WATERSHED

RECORDS OF U. S. WEATHER BUREAU AND CANADIAN METEOROLOGICAL SERVICE

1911

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Port Arthur	0.56	1.28	0.73	0.67	2.36	6.23	3.01	2.96	2.91	1.65	1.52	1.05	24.93
Duluth	1.12	1.89	1.66	1.09	3.45	2.76	5.83	3.02	3.35	1.37	2.59	2.17	30.30
Stephens Mine	0.75	1.01	1.67	0.80	3.36	3.13	3.62	5.40	4.13	0.80	1.40	1.31	27.38
Ely	.....	.....	.....	.....	2.90	4.12	4.20	2.56	3.43	0.61	.....	.....	.....
Virginia	0.82	0.82	1.72	0.86	2.55	3.36	3.68	5.54	3.41	0.74	1.58	1.23	26.31
International Falls	1.75	2.90	0.96	0.90	2.07	4.25	2.03	6.33	1.00	0.62	2.05	1.65	26.61
Little Fork	0.14	0.85	0.59	0.58	1.73	3.71	1.98	6.42	1.33	0.29	1.07	0.91	19.60
Pokegama Falls	0.54	1.00	1.24	1.51	3.50	4.49	4.73	4.63	4.72	0.91	0.77	0.51	28.55
Winnibigoshish	0.08	1.44	1.49	1.17	4.11	3.47	2.84	6.23	2.30	1.14	1.22	0.95	27.04
Warroad	1.02	0.94	0.35	1.00	3.12	4.63	2.70	2.14	2.10	1.38	1.95	.....	.....
Roseau	0.34	0.67	0.17	1.77	3.52	.....	2.08	5.52	1.47	.....	.....	.....	.....
Hallock	0.74	1.40	0.02	2.81	4.34	3.94	2.66	2.86	2.25	1.77	0.90	.....	.....
Pembina	0.20	2.85	0.33	3.14	5.18	0.70	3.17	1.21	0.89	1.19	0.32	0.33	19.51
Kenora	0.90	.....	0.10	2.10	3.90	2.60	7.84	4.50	3.70	2.30	0.40	1.50	.....
Winnipeg	0.43	0.71	0.28	2.57	6.38	2.27	2.96	2.33	2.43	1.84	0.59	0.59	23.38

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	0.7	1.1	0.9	0.9	2.6	4.1	3.3	4.5	2.8	1.0	1.4	1.2	24.5
Lower Rainy	0.6	1.0	0.9	0.9	2.9	3.9	3.0	5.0	2.6	0.9	1.3	1.0	24.0
Lake of Woods	0.8	1.1	0.4	1.6	3.3	3.5	3.7	4.8	2.6	1.5	1.2	1.1	25.6

1912

Port Arthur	0.26	0.33	0.36	2.50	3.03	1.75	1.97	2.54	4.97	1.20	0.42	0.78	20.11
Duluth	0.47	0.27	0.43	2.58	5.90	1.32	2.24	3.25	1.80	0.68	0.21	2.19	21.34
Stephens Mine	0.22	0.22	0.15	1.50	4.87	2.68	1.79	2.86	3.56	0.90	0.49	0.86	20.10
Ely	.....	.....	.....	.....	.....	1.99	2.72	1.45	6.35	0.85	0.19	0.89	.....
Virginia	0.23	0.24	0.24	1.53	4.81	2.55	2.25	3.10	4.48	0.45	0.40	0.68	20.96
International Falls	0.65	0.70	0.75	1.90	1.60	1.71	3.27	3.96	4.40	2.06	0.27	0.58	21.85
Little Fork	0.33	0.39	1.15	1.41	1.30	2.14	3.81	3.93	5.08	0.91	0.34	1.14	21.93
Pokegama Falls	0.15	0.04	0.16	1.19	3.60	1.78	2.94	2.30	3.52	0.18	0.33	0.78	16.97
Winnibigoshish	0.36	0.25	0.13	0.99	2.79	1.34	3.20	4.99	3.66	0.88	0.74	1.49	20.82
Baudette	0.09	0.24	0.27	1.63	2.29	1.34	5.97	.....	.....	.....	.....	0.41	.....
Warroad	0.10	0.55	0.04	2.21	2.83	0.70	4.73	3.27	6.42	1.44	0.55	0.65	23.49
Roseau	.....	.....	.....	.....	2.50	0.22	6.43	2.45	3.81	1.84	0.05	0.50	.....
Hallock	0.22	0.10	0.10	2.17	4.02	0.28	6.82	4.48	3.50	3.07	0.07	0.50	25.33
Pembina	0.07	0.21	0.08	0.90	6.04	0.14	4.24	2.05	1.55	1.06	0.70	0.42	17.46
Kenora	0.45	0.40	0.90	3.20	9.60	4.80	8.80	4.50	7.50	4.20	0.00	0.20	44.55
Winnipeg	0.30	0.18	0.30	2.25	3.59	0.91	6.11	1.64	5.49	1.15	0.11	0.78	22.81

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	0.3	0.3	0.4	2.1	3.6	2.2	3.2	3.1	5.1	1.5	0.3	0.8	22.9
Lower Rainy	0.2	0.3	0.3	1.6	3.0	1.6	3.7	3.3	4.6	1.0	0.3	0.7	20.6
Lake of Woods	0.2	0.3	0.4	2.5	4.1	2.2	5.8	3.7	5.4	2.5	0.2	0.5	27.8

1913

Port Arthur	0.54	0.56	1.22	0.75	3.43	2.41	6.26	2.87	3.85	3.73	1.27	0.08	26.97
Duluth	0.75	1.09	3.25	1.75	4.82	2.03	6.18	1.26	3.32	3.33	0.74	0.17	28.69
Ely	0.21	0.44	1.40	1.85	.....	.....	.....	.....	2.42	2.83	0.50	0.42	.....
International Falls	0.44	0.75	1.03	1.21	4.73	3.17	5.21	5.42	1.86	2.88	1.14	0.07	27.91
Little Fork	0.51	0.96	0.45	1.42	2.84	2.51	3.87	3.37	2.02	0.62	0.77	0.15	19.49
Pokegama Falls	0.24	0.44	1.85	2.17	4.18	3.48	7.95	4.09	3.66	3.43	0.87	0.07	32.43
Winnibigoshish	0.28	0.58	1.80	1.66	3.85	3.65	7.60	1.76	2.86	4.25	0.96	0.09	29.34
Baudette	0.57	0.44	0.63	1.05	2.18	3.22	4.70	4.21	2.61	3.17	0.40	0.03	23.21
Warroad	0.52	0.60	1.15	1.29	2.04	1.98	4.29	3.32	1.26	1.77	0.31	0.09	18.62
Roseau	0.53	0.45	0.69	1.23	1.37	1.58	3.56	3.21	1.75	2.13	0.08	*T	16.58
Hallock	0.35	0.24	1.07	1.14	1.15	1.94	2.29	5.56	2.65	1.80	0.20	0.07	18.46
Pembina	0.40	0.05	0.59	0.58	0.59	1.74	0.95	4.55	1.69	1.26	0.05	0.02	12.47
Kenora	0.80	0.90	0.65	0.60	1.10	4.50	.....	3.70	1.00	2.90	1.80	0.05	.....
Keewatin	.....	.....	.....	.....	1.28	2.09	3.84	4.27	1.02	3.21	1.35	.....	.....
Winnipeg	0.75	0.61	0.36	0.41	0.53	3.27	2.09	4.71	1.27	0.77	0.75	0.26	15.78

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	0.4	0.6	1.1	1.2	3.8	2.9	5.8	3.5	2.7	2.9	1.0	0.2	26.1
Lower Rainy	0.3	0.6	1.0	1.5	3.3	3.1	6.1	3.4	2.4	2.8	0.7	0.1	25.3
Lake of Woods	0.5	0.6	0.7	0.8	2.0	3.0	4.2	3.8	1.5	2.7	0.9	0.1	20.8

*T denotes trace.

TABLE 1—Continued

MONTHLY PRECIPITATION ON OR NEAR WATERSHED

RECORDS OF U. S. WEATHER BUREAU AND CANADIAN METEOROLOGICAL SERVICE

1914

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Port Arthur	0.97	0.39	0.94	1.37	1.35	1.30	2.30	4.48	2.70	1.35	1.16	0.23	18.54
Savanne	1.30	0.10	1.00	0.40	2.73	1.64	2.20	6.55	2.83	1.90	0.50	0.45	21.60
Ignace	3.56	0.55	0.90	1.93	3.91	2.87	2.87	3.51	5.26	2.25	1.78	1.27	30.66
Duluth	1.75	0.64	1.56	2.90	4.63	6.28	2.99	4.20	2.55	1.14	1.15	0.30	30.09
Stephens Mine	1.43	0.22	0.85	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Virginia	1.10	0.70	1.15	2.77	2.92	4.57	5.22	5.01	2.88	1.00	0.63	0.17	28.12
Winton	1.40	0.17	1.35	1.95	0.31	1.45	2.56	4.03	3.62	0.47	1.70	0.70	19.71
International Falls	1.11	0.35	0.96	1.79	3.68	3.84	3.05	3.56	3.54	2.56	0.41	0.28	25.13
Fort Frances	0.94	0.28	0.53	1.61	3.55	3.55	2.71	4.44	3.51	2.35	0.41	0.27	24.15
Little Fork	0.84	0.29	.....	.....	3.00	3.62	2.00	3.44	1.45	2.05	0.30	0.28	.....
Pokegama Falls	0.54	0.47	0.95	2.42	1.92	5.13	1.01	3.07	3.92	1.32	0.65	0.12	21.52
Winnibigoshish	0.89	0.33	1.09	2.12	2.81	6.11	2.34	5.23	3.59	3.96	0.81	0.30	29.58
Baudette	1.23	0.47	0.88	1.35	3.35	6.61	2.15	2.59	2.76	3.40	0.48	0.29	25.56
Warroad	0.97	0.30	0.80	1.08	2.80	5.47	4.04	2.16	4.85	2.88	0.65	0.41	26.41
Hallock	1.12	0.50	0.48	2.24	2.08	2.84	1.20	2.32	0.68	1.04	0.36	0.59	15.45
Roseau	1.20	0.35	0.80	0.38	2.10	3.54	3.10	3.61	3.54	2.19	0.45	0.47	21.73
Pembina	1.22	0.74	0.38	0.62	1.55	2.43	2.85	1.56	1.10	0.80	0.44	0.65	14.34
Kenora	1.30	0.65	.....	.....	.....	.....	.....	.....	.....	.....	1.00	0.40	.....
Keewatin	1.34	0.42	0.36	1.79	1.87	4.67	3.80	2.07	4.07	3.11	0.31	0.40	24.21
Winnipeg	0.79	0.83	0.59	0.75	1.65	1.46	7.14	2.05	2.28	2.22	0.72	1.40	21.88

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	1.2	0.3	0.9	1.6	3.0	3.0	3.0	4.4	3.4	1.9	0.6	0.4	23.7
Lower Rainy	1.1	0.4	0.9	1.8	2.8	4.6	2.8	3.7	3.4	2.2	0.6	0.3	24.6
Lake of Woods	1.2	0.5	0.6	1.6	2.5	4.8	3.3	2.6	3.7	2.9	0.5	0.4	24.6

1915

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Port Arthur	0.69	0.79	0.05	0.77	2.09	4.69	2.86	3.11	4.13	2.50	2.45	1.30	25.43
Savanne	0.90	0.70	0.20	1.30	0.80	3.80	0.80	0.60	3.20	2.50	0.80	1.60	17.20
Ignace	1.60	2.15	1.93	1.28	1.85	6.28	1.44	2.42	3.73	1.69	3.67	4.40	32.44
Duluth	1.84	1.50	0.36	1.23	3.22	4.96	1.60	1.56	2.28	3.08	3.27	0.87	25.77
Virginia	0.46	0.89	0.24	0.43	2.98	7.28	2.61	1.11	2.36	3.57	2.53	1.10	25.56
Winton	0.65	0.70	0.50	3.12	3.70	6.78	2.85	1.87	2.12	4.20	4.16	.....	.....
International Falls	0.89	0.92	0.45	2.03	1.84	7.03	2.47	1.04	3.75	1.05	1.77	0.76	24.00
Fort Frances	0.89	0.92	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Little Fork	0.60	0.60	0.30	1.03	2.91	8.06	1.81	1.49	4.16	.....	2.33	1.34	.....
Pokegama Falls	0.48	0.58	0.16	0.94	3.75	8.59	3.99	0.91	1.72	3.04	1.60	0.48	26.24
Winnibigoshish	0.73	0.63	0.39	0.58	3.58	12.67	4.42	1.18	1.79	2.36	1.56	0.56	30.45
Baudette	0.67	1.08	0.30	1.69	2.59	6.06	2.12	1.38	3.19	0.89	1.96	0.91	22.84
Warroad	0.33	0.94	0.10	2.30	1.41	8.08	2.86	0.28	2.47	0.40	2.14	0.54	21.85
Hallock	0.27	1.70	0.05	2.17	2.44	5.21	5.62	0.88	2.06	0.93	1.34	1.15	23.82
Roseau	0.45	0.95	0.10	2.01	1.52	6.20	2.27	1.45	1.21	0.37	0.84	0.89	18.26
Pembina	0.10	1.50	0.18	2.23	1.42	3.88	4.44	0.12	2.84	3.14	1.57	0.40	21.82
Kenora	0.40	0.80	0.20	1.82	2.83	3.10	.....	.....	.....	.....	.....	.....	.....
Keewatin	0.58	1.46	0.40	1.75	2.02	4.76	1.65	1.31	3.59	1.01	1.94	1.13	21.60
Whitefish Bay	0.84	1.44	0.24	4.70	1.83	7.18	1.15	0.27	3.45	0.66	1.41	1.05	24.22
Indian Bay, Shoal Lake	.....	.....	.....	0.51	0.93	4.69	1.56	0.55	3.03	1.30	2.08	0.78	.....
Winnipeg	0.38	1.06	0.11	1.31	0.82	2.56	1.83	0.13	4.89	1.03	1.16	1.69	16.97

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	0.9	0.9	0.4	1.5	2.1	6.2	1.8	1.5	3.3	2.3	2.5	1.2	24.6
Lower Rainy	0.6	0.8	0.3	1.5	2.9	7.8	2.9	1.2	2.5	2.0	2.2	0.9	25.6
Lake of Woods	0.6	1.1	0.3	2.0	2.0	6.1	1.8	1.0	3.2	0.9	1.8	0.9	21.7

TABLE 2

MEAN MONTHLY TEMPERATURE ON OR NEAR WATERSHED

RECORDS OF U. S. WEATHER BUREAU AND CANADIAN METEOROLOGICAL SERVICE

1885

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Port Arthur	− 3.7	0.8	8.0	32.5	44.3	54.4	61.2	56.1	50.6	37.3	28.9	16.2	32.2
Savanne	−10.5	− 4.1	0.8	33.1	48.2	58.0	64.4	58.0	48.2	33.2	22.4	10.1	30.15
Duluth	− 0.5	4.9	17.6	36.8	47.0	57.3	65.5	60.8	53.9	41.7	31.9	19.2	36.3
Pembina	−10.0	9.1	14.4	37.2	51.3	61.3	65.1	59.9	53.7	38.6	26.0	9.6	34.7
St. Vincent	− 9.9	− 4.2	15.1	36.7	50.6	58.8	63.4	58.3	53.1	40.0	27.6	11.6	33.4
Winnipeg	−13.2	− 6.1	8.8	35.6	50.6	60.5	64.9	58.8	52.8	37.5	26.3	8.6	32.1

AVERAGE MONTHLY TEMPERATURE ON WATERSHED SUBDIVISIONS

Upper Rainy	− 8	−2	9	36	49	59	65	59	50	37	26	12	32.5
Lower Rainy	− 7	−2	14	37	50	59	65	59	52	39	29	14	34.1
Lake of Woods	−10	−4	11	35	49	60	65	58	52	37	27	11	32.7

1886

Port Arthur	− 0.6	7.0	18.3	35.6	47.8	55.8	62.8	60.0	49.2	42.3	22.7	4.4	33.8
Savanne	− 8.3	− 1.9	13.0	40.8	48.9	58.7	64.6	59.6	47.1	40.8	16.0	−3.0	31.4
Duluth	5.7	12.4	23.9	36.7	52.2	57.6	66.1	63.9	50.6	46.9	27.8	8.9	37.7
Pembina	−11.9	1.1	16.9	43.8	54.9	63.3	69.7	69.9	51.2	45.4	18.9	−0.7	35.2
St. Vincent	−11.2	4.9	17.7	43.5	54.9	62.5	69.3	64.2	50.4	45.7	19.1	−0.7	35.0
Winnipeg	−13.8	− 1.3	15.6	42.2	53.6	63.0	69.5	64.4	48.7	45.0	17.1	−4.1	33.6

AVERAGE MONTHLY TEMPERATURE ON WATERSHED SUBDIVISIONS

Upper Rainy	−3	3	18	38	53	60	66	61	47	43	20	1	33.9
Lower Rainy	−2	5	20	38	55	61	67	63	49	44	22	3	35.4
Lake of Woods	−8	1	17	40	53	62	69	63	48	44	19	−1	33.8

1887

Port Arthur	− 4.2	4.5	13.9	31.3	51.0	57.6	64.2	58.7	51.6	35.3	23.0	12.6	33.3
Savanne	−11.5	− 1.1	10.7	30.7	57.7	63.9	64.6	56.9	47.9	30.1	15.9	4.6	30.9
Duluth	2.0	9.7	21.1	36.7	49.0	55.4	66.6	62.4	55.4	41.0	30.2	17.9	37.3
Pokegama Falls	.....	.....	.....	.....	58.8	.....	*66.5	59.3	51.8	34.7	.....	7.9	.....
Pembina	−13.1	− 4.2	15.2	35.7	57.0	62.0	.....	60.3	54.3	36.2	19.9	2.5	.....
St. Vincent	−12.7	− 4.1	16.1	38.0	57.7	65.3	66.2	60.7	54.8	35.0	19.9	2.5	33.3
Winnipeg	−14.5	− 8.0	11.7	37.3	57.2	64.6	66.5	61.0	53.8	32.4	17.4	0.2	31.6

AVERAGE MONTHLY TEMPERATURE ON WATERSHED SUBDIVISIONS

Upper Rainy	− 7	2	15	35	58	63	66	59	50	33	19	7	33.3
Lower Rainy	− 5	2	17	36	58	63	67	61	52	35	21	7	34.5
Lake of Woods	−10	−4	14	36	56	63	64	60	53	33	19	3	32.2

1888

Port Arthur	− 3.2	5.1	10.3	30.6	40.1	53.2	61.8	57.7	47.9	36.8	27.4	17.6	32.1
Savanne	−10.4	0.9	5.6	29.5	41.5	59.6	63.9	58.7	.....	.....	.....	8.2	.....
Duluth	2.1	12.1	15.5	35.0	42.2	53.8	64.9	63.8	55.6	43.6	34.2	24.7	37.3
Pokegama Falls	− 8.0	4.2	10.5	33.7	43.0	.....	64.9	60.6	48.6	38.3	26.3	15.8	.....
Winnibigoshish	.....	5.6	12.9	.....	45.2	.....	67.7	63.9	55.3	41.6	29.6	18.7	.....
Pembina	.....	.....	.....	.....	.....	.....	69.8	.....	53.8	41.0	25.8	15.2	.....
St. Vincent	−13.5	− 0.1	7.8	34.8	46.5	62.8	66.0	60.8	54.6	41.2	25.0	15.4	33.4
Winnipeg	−14.2	− 1.8	6.3	32.8	45.7	62.5	65.6	60.7	53.1	39.7	23.7	12.9	32.2

AVERAGE MONTHLY TEMPERATURE ON WATERSHED SUBDIVISIONS

Upper Rainy	− 9	3	9	32	43	61	65	60	49	37	25	14	32.4
Lower Rainy	− 8	4	11	34	44	62	66	61	52	40	27	17	34.2
Lake of Woods	−11	0	8	32	44	62	66	60	52	39	25	15	32.7

*3 days missing.

TABLE 2—Continued

MEAN MONTHLY TEMPERATURE ON OR NEAR WATERSHED

RECORDS OF U. S. WEATHER BUREAU AND CANADIAN METEOROLOGICAL SERVICE

1889

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Port Arthur	12.3	0.5	26.2	35.4	46.6	53.0	61.4	59.1	51.0	35.1	24.1	20.1	35.4
Savanne	6.4	−1.1	22.1	32.1	41.4	58.7	62.0	57.5	46.3	31.1	20.9	15.0	32.7
Duluth	19.6	8.8	33.1	40.8	48.8	57.5	64.0	64.8	54.8	42.3	31.0	25.6	40.9
Pokegama Falls	11.2	.....	29.2	39.2	46.3	58.8	63.0	63.2	50.4	37.9	23.0	18.5	.....
Winnibigoshish	11.6	3.1	30.6	42.8	52.6	63.4	66.9	65.7	52.6	40.0	24.6	18.3	39.3
Pembina	7.1	−0.8	29.4	41.3	51.3	64.0	66.1	67.2	53.4	41.5	26.0	11.8	38.2
St. Vincent	6.7	−3.0	30.4	42.8	50.4	62.8	65.0	65.5	51.6	40.4	23.9	10.6	37.2
Winnipeg	6.1	−3.7	26.2	42.2	49.7	63.6	65.2	66.2	48.8	38.8	23.1	7.9	36.2
AVERAGE MONTHLY TEMPERATURE ON WATERSHED SUBDIVISIONS													
Upper Rainy	10	1	27	38	47	60	63	61	49	36	22	17	36.1
Lower Rainy	12	2	30	41	48	61	65	64	51	39	24	17	37.8
Lake of Woods	9	−1	28	40	48	62	65	65	49	39	24	12	36.6

1890

Port Arthur	4.6	8.9	13.8	34.0	40.2	59.7	63.4	58.8	48.9	40.7	27.9	15.8	34.7
Savanne	− 0.8	3.5	10.4	34.2	38.9	61.6	62.0	55.9	49.0	40.0	23.6	10.6	32.4
Duluth	12.2	16.6	21.6	40.6	43.2	57.5	66.3	60.7	55.1	45.0	34.4	22.6	39.7
Pokegama Falls	3.3	9.4	15.6	40.9	45.2	65.8	67.6	59.1	50.5	40.4	29.3	15.5	36.9
Winnibigoshish	3.1	8.5	15.9	41.2	47.2	67.1	68.0	60.4	52.9	41.6	30.0	16.9	37.7
Pembina	− 7.4	− 6.4	11.1	41.8	45.4	67.8	69.1	63.1	54.1	43.7	32.4	16.8	35.9
St. Vincent	−10.0	− 3.2	11.8	41.4	45.2	68.8	68.8	60.1	51.3	42.0	28.4	19.0	35.3
Winnipeg	−12.1	− 5.6	7.3	38.1	43.8	68.2	67.3	59.5	50.6	41.6	28.9	13.1	33.4
AVERAGE MONTHLY TEMPERATURE ON WATERSHED SUBDIVISIONS													
Upper Rainy	2	8	14	38	43	63	65	58	50	41	27	14	35.2
Lower Rainy	2	6	15	41	45	65	67	59	52	42	30	17	36.8
Lake of Woods	−6	−2	11	38	43	67	67	59	50	41	30	16	34.5

1891

Port Arthur	11.9	3.7	14.9	35.1	45.1	56.8	58.8	59.4	55.7	40.8	22.5	25.0	35.8
Savanne	6.4	−1.9	10.6	37.9	44.0	56.8	52.9	55.6	54.6	38.7	16.9	20.4	32.7
Duluth	20.5	12.2	19.5	39.3	48.6	53.8	61.3	62.3	61.6	46.4	25.2	26.9	39.8
Little Forks	3.2	3.6	22.3	41.6	56.5	62.6	60.5	64.3	51.2	44.9	18.8	9.4	36.6
Pokegama Falls	13.4	5.5	23.1	.....	50.8	60.5	61.9	.....	.....	.....	.....	.....	.....
Winnibigoshish	13.3	5.6	18.9	43.6	53.0	60.6	61.7	62.0	60.5	42.9	.....	21.2	.....
Pembina	8.2	−3.0	9.7	46.0	51.4	62.0	62.8	64.5	58.4	41.7	17.0	12.5	35.9
St. Vincent	11.0	−2.6	11.6	44.1	51.4	61.4	61.0	62.2	58.2	43.0	18.7	13.2	36.1
Winnipeg	7.2	−7.4	8.3	42.5	49.8	60.7	61.4	60.8	54.4	38.1	14.4	11.0	33.4
AVERAGE MONTHLY TEMPERATURE ON WATERSHED SUBDIVISIONS													
Upper Rainy	11	3	16	41	49	59	58	59	57	41	19	20	36.1
Lower Rainy	14	4	17	44	51	60	61	61	59	43	21	18	37.8
Lake of Woods	11	−3	12	42	49	60	61	61	56	40	18	13	35.0

1892

Port Arthur	1.1	10.0	18.6	31.5	46.1	57.4	64.5	61.2	51.7	41.5	23.4	8.8	34.6
Savanne	−4.8	5.0	17.2	27.8	43.0	55.9	63.0	59.2	50.9	40.7	16.6	1.5	31.3
Duluth	8.1	17.6	23.5	34.8	44.4	56.2	69.6	66.8	59.4	49.0	26.4	13.9	39.1
Fort Frances	.....	6.4	16.4	30.8	42.9	56.9	61.3	58.0	52.0	43.2	15.6	3.8	.....
Little Forks	−1.4	6.8	16.1	33.1	44.4	57.8	62.6	53.4	53.1	50.2	15.5	−2.2	32.4
Pokegama Falls	.....	.....	20.5	35.5	44.6	61.7	.....	66.4	57.4	43.8	21.0	5.2	.....
Winnibigoshish	1.0	13.0	22.4	35.0	46.5	61.5	67.0	65.5	57.8	45.3	21.2	6.8	36.9
Pembina	−0.6	6.3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Vincent	−2.9	5.2	20.4	34.8	46.2	60.5	66.7	65.3	57.7	46.0	18.7	1.4	35.0
Winnipeg	−8.4	−0.2	16.0	31.6	45.8	61.2	67.2	63.4	53.0	41.2	14.4	−1.9	31.9
AVERAGE MONTHLY TEMPERATURE ON WATERSHED SUBDIVISIONS													
Upper Rainy	−1	9	18	31	44	57	64	61	53	43	17	4	33.3
Lower Rainy	1	10	20	34	45	59	66	63	56	45	20	5	35.3
Lake of Woods	−3	3	18	31	44	59	65	62	53	42	16	1	32.6

TABLE 2—Continued

MEAN MONTHLY TEMPERATURE ON OR NEAR WATERSHED

RECORDS OF U. S. WEATHER BUREAU AND CANADIAN METEOROLOGICAL SERVICE

1893

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Port Arthur	−2.0	−1.2	16.3	28.6	45.0	58.3	64.0	59.7	49.0	39.6	24.2	3.2	32.1
Savanne	−8.4	−2.4	12.5	24.3	43.7	63.2	63.2	57.3	55.0	36.6	20.1	−4.4	30.1
Duluth	4.8	8.2	22.8	33.4	47.0	60.4	66.3	64.7	56.4	44.9	28.6	11.2	37.4
Fort Frances	−4.2	−3.6	14.2	30.5	46.3	65.2	64.8	59.3	51.6	38.4	21.8	−3.2	31.5
Pokegama Falls	−6.0	0.0	16.8	31.1	48.1	67.0	68.6	61.6	52.5	41.4	22.8	1.0	33.7
Winnibigoshish	−1.4	1.9	18.9	32.4	49.6	67.0	67.3	63.2	55.1	41.4	21.7	1.2	34.9
St. Vincent	−4.2	−4.6	10.4	27.8	51.2	65.5	66.4	63.8	55.4	40.1	19.8	−2.7	32.4
Winnipeg	−10.0	−9.2	7.4	27.3	51.8	65.4	67.4	61.8	51.7	35.3	14.0	−8.0	29.6
AVERAGE MONTHLY TEMPERATURE ON WATERSHED SUBDIVISIONS													
Upper Rainy	−4	−1	15	29	47	65	65	60	53	39	21	−1	32.3
Lower Rainy	−2	−1	16	30	49	66	66	62	54	41	22	1	33.7
Lake of Woods	−5	−6	10	27	49	65	66	61	52	37	18	−5	30.7

1894

Port Arthur	4.0	5.8	23.1	35.2	45.8	59.5	63.5	57.6	52.8	42.3	22.8	18.8	35.9
Savanne	0.1	0.9	19.0	35.4	43.9	63.6	63.8	58.0	53.4	39.4	16.9	12.1	33.9
Duluth	12.6	14.6	29.4	37.8	48.2	62.7	68.6	64.9	59.8	46.9	26.2	26.2	41.5
Fort Frances	−1.3	3.0	24.3	38.5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pokegama Falls	1.8	6.0	25.7	40.9	50.9	68.0	70.2	72.6	55.0	41.6	18.1	17.4	39.0
Winnibigoshish	3.8	9.8	27.0	42.2	52.6	67.8	70.3	65.7	57.8	43.6	20.8	20.1	40.1
Red Lake	1.7	9.8	25.8	44.4	50.0	.....	71.2	66.2	58.2	43.2	21.4	20.0	.....
St. Vincent	−4.7	4.5	21.7	41.5	52.8	68.3	68.6	65.6	56.3	42.4	19.5	16.2	37.7
Winnipeg	−8.8	1.6	17.2	38.6	52.7	68.8	68.6	64.2	50.9	37.6	17.3	13.4	35.2
AVERAGE MONTHLY TEMPERATURE ON WATERSHED SUBDIVISIONS													
Upper Rainy	2	5	23	38	49	65	67	63	55	42	18	17	37.0
Lower Rainy	2	6	25	41	51	67	69	66	56	43	19	19	38.7
Lake of Woods	−4	3	21	38	51	68	69	65	53	39	18	16	36.4

1895

Port Arthur	3.5	7.5	14.5	38.6	47.9	57.7	59.6	59.2	52.5	34.9	23.3	16.4	34.6
Savanne	−3.9	0.3	8.4	36.4	50.1	57.1	57.9	56.4	51.2	32.1	17.2	9.3	31.0
Duluth	7.8	12.6	23.3	41.8	50.2	57.4	62.4	65.4	57.6	42.0	29.0	19.8	39.1
Mount Iron	0.4	6.8	18.4	44.4	52.3	60.9	61.2	60.8	54.2	37.2	22.6	14.3	36.1
Tower	.....	.....	.....	.....	.....	61.5	61.6	61.6	56.0	39.0	24.8	14.3	.....
Koochiching	.....	.....	14.4	42.7	53.4	58.4	63.0	62.0	54.1	33.7	21.8	6.8	.....
Pokegama Falls	−1.7	6.2	19.5	44.5	51.5	60.8	62.6	61.0	54.7	34.4	23.2	11.4	35.7
Winnibigoshish	0.7	6.6	19.3	46.4	54.1	59.7	63.8	62.6	56.3	35.7	24.2	13.6	36.9
Red Lake	−2.2	9.6	18.6	46.3	49.2	60.1	64.5	62.2	56.2	.....	22.8	14.4	.....
Roseau	.....	.....	.....	50.2	52.8	58.4	.....	.....	51.8	37.4	19.6	.....	.....
St. Vincent	−6.2	2.7	18.6	48.2	54.2	58.2	63.2	62.4	53.6	39.0	19.4	10.2	35.3
Winnipeg	−9.2	−0.4	11.6	47.3	54.0	58.5	63.7	61.4	51.9	38.3	17.8	8.0	33.9
AVERAGE MONTHLY TEMPERATURE ON WATERSHED SUBDIVISIONS													
Upper Rainy	−2	4	14	41	52	59	61	60	54	35	21	10	34.1
Lower Rainy	0	5	19	46	53	59	63	61	54	38	22	12	35.8
Lake of Woods	−5	2	15	46	52	58	63	61	52	36	19	9	34.0

TABLE 2—Continued

MEAN MONTHLY TEMPERATURE ON OR NEAR WATERSHED

RECORDS OF U. S. WEATHER BUREAU AND CANADIAN METEOROLOGICAL SERVICE

1896

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Port Arthur	9.3	12.4	15.9	35.5	51.6	59.8	63.5	60.2	51.1	38.5	19.7	16.0	36.1
Savanne	1.9	5.1	8.4	33.2	52.3	57.6	59.4	57.3	48.1	34.4	11.8	8.2	31.5
Duluth	13.4	16.4	22.2	38.1	53.3	61.0	66.5	65.4	54.6	41.8	21.0	21.8	39.6
Mount Iron	6.8	11.3	17.9	39.6	55.9	60.2	64.3	62.1	50.2	36.6	14.1	15.8	36.2
Tower	8.5	11.7	15.2	38.4	58.6	59.6	64.8	61.1	51.9	36.4	13.1	13.8	36.1
Koochiching	12.6	6.6	12.2	39.4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pokegama Falls	5.4	8.6	15.2	36.5	56.0	63.2	66.0	61.6	50.2	35.1	11.5	13.6	35.2
Winnibigoshish	7.0	11.4	18.2	38.0	56.8	64.0	66.4	63.8	50.7	38.6	14.9	16.6	37.2
Roseau	0.3	7.0	11.0	37.2	54.6	64.5	62.0	60.0	48.6	.....	6.2	11.9	.....
Winnipeg	−3.7	5.5	12.4	36.1	55.1	64.0	64.8	61.4	50.2	37.6	6.9	10.7	33.4

AVERAGE MONTHLY TEMPERATURE ON WATERSHED SUBDIVISIONS

Upper Rainy	5	8	12	37	55	60	63	60	49	36	13	12	34.3
Lower Rainy	4	9	14	38	56	63	65	61	50	37	12	14	35.3
Lake of Woods	1	7	12	36	54	63	64	60	49	36	8	12	33.6

1897

Port Arthur	6.9	13.2	19.5	36.1	46.5	53.7	64.1	59.7	57.0	44.4	23.1	11.3	36.3
Savanne	0.0	6.1	15.6	33.4	44.9	53.6	65.5	56.3	56.3	39.5	14.5	3.1	32.4
Duluth	9.4	18.6	21.8	40.0	48.4	54.2	66.4	63.8	62.6	48.6	26.2	14.2	39.5
Mount Iron	2.7	12.0	19.3	39.2	49.4	56.8	67.4	58.6	59.6	42.8	17.6	3.2	35.7
Tower	2.9	9.6	14.6	35.5	50.0	54.7	67.5	58.5	57.2	40.1	18.4	3.8	34.4
Koochiching	.....	7.3	14.4	38.8	.....	.....	68.2	60.3	60.6	45.0	18.8	6.4	.....
Pokegama Falls	1.3	9.1	17.8	42.3	50.8	57.3	68.3	60.3	61.6	45.7	19.5	5.5	36.6
Winnibigoshish	1.2	10.1	17.9	38.5	51.6	57.9	68.0	62.3	62.1	45.0	20.7	6.6	36.8
Roseau	−0.5	4.8	11.4	39.4	52.4	58.2	67.2	.....	.....	43.9	17.0	4.2	.....
Winnipeg	−1.7	0.9	11.2	39.7	53.1	59.3	67.9	61.6	61.1	44.6	15.0	3.9	34.7

AVERAGE MONTHLY TEMPERATURE ON WATERSHED SUBDIVISIONS

Upper Rainy	1	8	16	36	48	55	67	58	58	42	17	4	34.2
Lower Rainy	1	8	15	39	51	57	68	60	60	44	19	5	35.6
Lake of Woods	0	4	12	38	51	58	68	61	60	44	17	5	34.8

1898

Port Arthur	10.4	10.5	24.2	35.5	47.9	54.5	60.4	59.6	55.9	41.7	28.1	12.2	36.7
Savanne	3.9	3.2	21.7	27.5	48.6	56.3	60.6	56.5	54.1	37.4	19.7	3.8	32.8
Duluth	19.0	17.2	30.6	40.3	50.7	57.0	65.9	64.4	59.2	43.8	29.0	13.5	40.9
Mount Iron	10.5	14.7	21.2	33.0	47.0	60.8	65.0	60.9	55.1	37.2	20.9	10.4	36.4
Tower	8.8	5.6	21.4	30.6	.....	.....	.....	.....	54.8	38.8	23.5	6.7	.....
Koochiching	8.8	7.8	23.4	37.5	49.2	59.7	65.2	62.0	55.5	39.6	21.0	5.7	36.3
Pokegama Falls	9.5	8.9	25.4	39.6	50.6	61.7	65.5	61.8	55.8	39.1	23.0	4.4	37.1
Winnibigoshish	11.3	9.8	24.6	39.2	52.0	62.4	66.6	63.0	56.7	39.6	21.9	5.4	37.7
Roseau	4.9	8.0	19.0	39.0	46.8	.....	.....	61.6	52.2	.....	.....	4.9	.....
Pembina	.....	.....	.....	.....	54.0	61.0	66.4	63.8	56.4	.....	.....	.....	.....
Winnipeg	3.7	4.9	16.0	38.3	53.2	60.3	65.7	63.0	55.6	37.7	19.4	4.3	35.2

AVERAGE MONTHLY TEMPERATURE ON WATERSHED SUBDIVISIONS

Upper Rainy	7	7	22	32	48	59	64	60	55	38	21	6	34.9
Lower Rainy	8	9	22	37	49	61	66	62	55	39	22	6	36.3
Lake of Woods	6	7	18	37	49	60	65	62	54	38	21	5	35.1

TABLE 2—Continued

MEAN MONTHLY TEMPERATURE ON OR NEAR WATERSHED

RECORDS OF U. S. WEATHER BUREAU AND CANADIAN METEOROLOGICAL SERVICE

1899

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Port Arthur	3.2	1.4	9.9	36.3	46.6	55.9	61.8	60.8	48.8	44.3	36.7	14.3	35.0
Duluth	9.4	6.3	15.2	39.9	46.6	58.1	64.8	64.8	55.1	47.6	40.6	19.2	39.0
Mount Iron	2.6	0.0	10.6	40.7	48.6	60.6	65.4	64.3	49.8	44.8	34.2	13.2	36.2
Tower	−1.7	1.8	4.4	41.2	51.2	59.6	63.2	64.2	50.9	43.1	34.6	16.0	35.7
Pokegama Falls	0.3	−1.6	8.2	39.2	49.7	60.7	66.0	64.0	51.7	44.2	35.4	12.8	35.9
Winnibigoshish	0.7	0.9	8.8	38.4	50.2	60.7	67.1	64.7	53.7	45.9	37.6	14.9	37.0
Roseau	.....	−6.6	.....	.....	48.0	62.4	66.8	61.9	54.1	.....	34.9	.....	.....
Hallock	.....	−4.1	8.2	38.0	51.4	64.4	67.0	64.0	53.7	42.5	34.6	9.6	.....
Pembina	.....	.....	.....	39.5	52.2	64.6	69.0	63.8	52.8	41.2	35.0	9.6	.....
Rat Portage	.....	.....	.....	.....	.....	.....	.....	.....	50.4	43.4	34.8	10.0	.....
Winnipeg	−4.8	−6.9	3.2	36.7	50.5	62.4	66.6	63.2	52.7	42.2	34.7	9.7	34.2

AVERAGE MONTHLY TEMPERATURE ON WATERSHED SUBDIVISIONS

Upper Rainy	−1	−2	6	37	49	59	63	62	49	43	33	11	34.1
Lower Rainy	−2	−2	10	39	50	61	66	63	52	44	35	13	35.8
Lake of Woods	−4	−5	5	36	48	61	66	63	51	43	35	11	34.1

1900

Port Arthur	14.8	1.5	16.6	40.6	50.8	57.9	61.9	63.5	54.7	49.2	25.1	17.2	37.8
Savanne	7.5	−4.7	7.9	40.1	50.9	58.2	57.2	63.1	50.2	.....	.....	.....	.....
Duluth	18.4	6.6	21.5	44.7	53.2	59.2	64.7	67.6	58.6	53.5	27.0	19.6	41.2
Mount Iron	13.2	0.6	17.4	45.4	54.2	63.2	62.8	70.6	55.2	51.3	20.8	12.6	38.9
Tower	13.5	1.4	21.2	49.0	52.0	.....	.....	.....	.....	.....	23.0	14.0	.....
Koochiching	.....	.....	15.0	45.0	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pokegama Falls	10.9	−2.4	18.0	47.4	55.0	62.2	63.1	70.4	55.7	51.8	22.7	11.6	38.9
Winnibigoshish	14.2	1.6	19.0	47.6	58.2	64.2	61.8	69.9	56.8	52.8	22.6	15.2	40.6
Hallock	8.8	−3.8	15.3	50.2	57.8	66.0	65.0	70.2	55.2	48.2	17.2	11.4	38.5
Pembina	9.1	−5.4	15.0	49.0	58.0	65.9	64.4	68.6	54.2	47.0	16.9	11.0	37.8
Rat Portage	7.3	−5.8	13.4	47.3	55.7	63.7	63.7	68.2	55.5	48.2	20.3	10.6	37.3
Winnipeg	6.6	−5.3	12.3	47.9	57.3	66.3	64.9	67.4	53.6	46.1	16.0	9.4	36.9

AVERAGE MONTHLY TEMPERATURE ON WATERSHED SUBDIVISIONS

Upper Rainy	11	−2	14	44	53	61	61	68	53	49	21	11	37.0
Lower Rainy	12	−1	17	47	56	63	64	69	55	51	21	13	38.9
Lake of Woods	9	−4	14	47	56	63	64	68	55	49	20	11	37.7

1901

Port Arthur	7.6	5.6	17.8	38.3	49.2	56.8	64.0	62.1	52.6	42.3	24.7	12.1	36.1
Savanne	.....	.....	.....	.....	.....	59.0	65.5	60.2	48.5	38.5	17.3	5.3	.....
Duluth	12.9	10.9	24.8	40.8	49.8	57.2	65.8	67.8	57.4	48.2	29.4	14.8	40.0
Mount Iron	6.4	5.9	21.5	43.4	55.1	60.6	68.0	63.7	53.5	43.5	22.6	7.0	37.6
Tower	9.8	7.8	22.2	42.7	56.8	61.2	68.7	62.0	51.6	43.8	21.9	6.4	37.9
Pokegama Falls	1.0	0.0	18.4	41.2	54.1	60.4	68.8	65.4	53.3	43.6	22.9	7.4	36.4
Winnibigoshish	6.5	4.0	21.8	38.0	56.8	60.7	70.4	67.8	55.2	46.8	24.8	10.8	38.6
Warroad	.....	.....	18.6	41.2	55.2	59.4	69.4	64.8	52.9	49.3	22.4	6.5	.....
Hallock	1.8	2.2	21.5	44.0	58.2	61.2	69.0	64.5	52.7	45.3	23.4	8.8	37.7
Pembina	0.2	1.0	20.3	41.5	57.8	60.4	68.4	63.4	51.2	43.4	21.9	8.6	36.5
Rat Portage	8.7	2.8	19.3	41.2	56.6	60.6	68.5	64.8	52.7	44.3	22.2	7.0	37.4
Winnipeg	−3.5	0.1	15.6	42.8	58.2	60.2	69.3	64.6	52.0	44.7	22.6	9.4	36.3

AVERAGE MONTHLY TEMPERATURE ON WATERSHED SUBDIVISIONS

Upper Rainy	4	2	18	39	53	60	67	63	51	42	21	7	35.6
Lower Rainy	5	3	20	41	55	60	69	65	53	46	23	8	37.4
Lake of Woods	6	2	19	40	55	60	69	65	52	45	22	7	36.9

TABLE 2—Continued

MEAN MONTHLY TEMPERATURE ON OR NEAR WATERSHED

RECORDS OF U. S. WEATHER BUREAU AND CANADIAN METEOROLOGICAL SERVICE

1902

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Port Arthur	10.9	15.0	27.5	35.8	46.7	52.6	63.2	58.9	50.2	40.6	30.7	11.7	37.0
Savanne	3.3	9.5	24.8	33.2	47.0	51.7	63.9	56.9	48.7	36.4	25.8	3.0	33.7
Duluth	16.8	18.0	31.9	39.2	47.6	55.2	66.2	62.2	53.2	46.5	34.1	16.4	40.6
Mount Iron	10.3	14.7	31.5	38.4	54.4	57.0	65.2	59.5	51.4	42.0	29.7	8.8	38.6
Tower	10.4	6.0	29.5	36.2	53.2	54.6	64.5	59.4	51.6	42.8	30.4	10.0	37.4
Pokegama Falls	9.1	11.0	30.7	40.0	56.0	59.9	69.0	61.4	50.2	40.9	28.2	7.6	38.7
Winnibigoshish	11.6	13.5	30.2	38.2	54.5	60.2	68.4	62.6	52.6	44.6	29.1	10.4	39.7
Hallock	9.1	11.2	28.6	39.0	56.0	57.4	66.6	62.8	52.8	43.4	25.8	5.3	38.2
Pembina	9.4	.....	.....	37.2	54.2	58.2	68.0	62.8	51.6	41.7	23.6	3.8	.....
Rat Portage	4.9	10.7	28.7	35.9	52.8	56.0	67.6	59.6	52.8	41.5	26.5	4.7	36.8
Winnipeg	7.5	10.4	26.2	37.3	55.1	57.0	67.8	64.2	52.8	41.9	26.0	4.5	37.6

AVERAGE MONTHLY TEMPERATURE ON WATERSHED SUBDIVISIONS

Upper Rainy	8	10	28	36	52	56	66	59	50	40	28	7	36.7
Lower Rainy	11	11	30	38	54	58	67	61	51	43	28	8	38.3
Lake of Woods	8	11	29	36	53	57	68	60	51	42	26	6	37.3

1903

Port Arthur	7.8	7.9	24.0	35.2	46.4	56.9	61.8	57.3	50.0	43.4	26.0	7.5	35.4
Savanne	−0.3	1.6	18.0	34.3	49.1	54.6	61.2	54.0	47.0	39.8	19.4	−1.1	31.5
Duluth	12.5	14.4	30.2	40.0	47.2	59.0	64.3	60.4	54.8	48.4	28.4	9.6	39.1
Mount Iron	5.4	8.2	25.3	39.8	53.5	59.8	63.0	57.2	51.2	44.6	20.1	3.2	35.9
Tower	4.8	7.2	26.2	39.0	52.1	56.4	60.1	53.0	50.0	47.0	14.2	2.4	34.4
Pokegama Falls	2.9	4.4	25.0	39.4	53.6	58.8	63.6	58.8	52.3	44.8	20.1	−0.6	35.3
Winnibigoshish	4.6	7.5	23.4	39.2	54.2	60.6	65.0	60.5	53.6	46.4	23.3	4.8	36.9
Warroad	.....	.....	20.2	37.8	53.7	62.4	66.8	62.2	50.3	46.2	.....	.....	.....
Hallock	2.6	2.2	20.9	40.7	54.6	61.8	65.3	61.6	51.0	46.8	20.8	3.4	36.0
Pembina	2.4	1.7	18.1	39.8	53.7	62.4	65.2	61.2	49.4	44.2	20.8	2.2	35.1
Rat Portage	1.5	2.0	21.1	38.8	53.4	61.3	64.4	60.0	50.3	45.7	22.3	1.5	35.2
Winnipeg	2.3	2.9	17.8	40.0	54.2	61.5	65.4	61.2	49.6	45.0	18.8	2.2	35.1

AVERAGE MONTHLY TEMPERATURE ON WATERSHED SUBDIVISIONS

Upper Rainy	3	4	22	37	52	57	62	56	50	44	19	1	33.9
Lower Rainy	4	5	23	39	53	60	64	59	51	46	20	3	35.6
Lake of Woods	3	2	21	38	53	61	64	60	50	46	22	2	35.2

1904

Port Arthur	4.4	0.5	18.4	33.3	47.4	55.5	60.4	58.4	50.2	41.0	30.9	10.1	34.2
Savanne	−4.1	−6.6	12.5	30.6	46.8	57.5	57.4	55.0	46.1	36.6	25.0	1.9	29.9
Duluth	4.4	1.0	18.7	34.2	48.8	56.1	62.2	61.2	52.2	43.8	34.5	14.4	36.0
Mount Iron	0.5	−2.0	18.6	34.4	51.1	60.0	59.8	60.5	52.0	43.6	33.0	10.0	35.1
Tower	−8.4	−1.8	15.6	31.1	45.2	58.7	.....	.....	.....	.....	.....	.....	.....
Pokegama Falls	−4.2	−6.8	18.4	34.2	50.0	58.6	60.7	60.0	50.0	40.5	29.7	5.2	33.0
Winnibigoshish	−1.7	−3.4	18.1	34.3	51.5	61.1	64.1	62.2	53.4	43.4	33.5	11.4	35.7
Hallock	−2.6	−7.4	16.0	36.7	54.4	61.4	62.6	60.9	52.0	44.3	32.2	7.8	34.9
Pembina	−4.2	−9.8	13.4	35.7	54.6	61.8	64.0	60.7	51.0	43.8	33.2	7.1	34.3
Rat Portage	−3.1	−5.3	15.1	35.2	53.9	61.5	63.8	61.8	51.8	43.9	31.1	6.4	34.7
Winnipeg	−3.0	−7.8	12.8	35.1	53.5	61.1	63.3	61.0	51.5	43.6	32.0	6.2	34.1

AVERAGE MONTHLY TEMPERATURE ON WATERSHED SUBDIVISIONS

Upper Rainy	−4	−5	15	32	48	59	59	58	49	40	30	6	32.2
Lower Rainy	−3	−6	17	34	51	60	61	60	51	43	32	9	33.9
Lake of Woods	−3	−7	15	34	53	60	63	60	51	43	32	7	34.5

TABLE 2—Continued

MEAN MONTHLY TEMPERATURE ON OR NEAR WATERSHED

RECORDS OF U. S. WEATHER BUREAU AND CANADIAN METEOROLOGICAL SERVICE

1905

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Port Arthur	4.4	8.4	21.6	35.2	45.8	54.6	61.4	61.4	54.6	40.3	26.9	18.7	36.1
Savanne	−5.2	0.4	17.2	31.6	43.6	54.8	59.1	58.5	52.6	33.8	19.9	9.1	31.3
Duluth	5.5	8.8	26.0	38.2	47.0	55.5	62.6	64.8	58.6	41.0	30.4	19.9	38.2
Mount Iron	2.6	6.9	26.7	37.6	48.6	59.6	64.2	64.0	57.4	39.4	27.6	16.4	37.6
Pokegama Falls	.....	.....	22.6	34.6	49.8	59.5	64.8	65.8	59.2	41.0	28.7	16.8	.....
Winnibigoshish	−0.2	4.7	26.8	36.4	50.0	60.2	66.2	65.8	58.6	40.6	29.2	17.7	38.0
Hallock	−4.9	2.9	26.4	38.4	50.4	58.4	65.2	65.8	59.8	38.5	28.2	12.0	36.8
Pembina	−5.5	2.0	25.2	37.8	50.3	58.0	64.8	65.6	58.4	38.0	27.2	11.4	36.1
Rat Portage	−3.1	3.9	22.8	36.7	47.7	57.3	64.8	64.4	58.4	38.7	25.8	14.5	36.0
Winnipeg	−5.1	1.6	23.8	38.4	50.4	58.5	65.3	65.4	58.6	38.1	26.7	11.6	36.1

AVERAGE MONTHLY TEMPERATURE ON WATERSHED SUBDIVISIONS

Upper Rainy	−1	3	22	35	47	58	63	62	56	38	25	14	35.2
Lower Rainy	0	2	27	37	49	59	65	64	58	38	28	13	36.7
Lake of Woods	−2	3	23	36	48	58	64	64	58	39	27	14	36.0

1906

Port Arthur	16.4	9.6	17.6	40.3	43.8	57.1	62.1	61.5	57.6	40.4	32.0	12.9	37.6
Savanne	7.1	−1.2	9.2	38.7	44.6	59.1	60.6	.....	.....	.....	.....	.....	.....
Duluth	16.8	10.8	18.6	43.4	44.8	56.8	65.0	64.0	61.0	42.1	29.6	14.8	39.0
Mount Iron	14.8	8.2	17.2	44.4	49.1	60.9	65.2	63.8	58.6	42.1	27.5	11.4	38.6
International Falls*	.....	.....	.....	.....	.....	.....	67.8	64.2	60.6	.....	.....	.....	.....
Pokegama Falls	14.2	8.8	16.2	45.0	49.5	62.0	66.2	64.8	61.2	44.1	29.2	10.9	39.3
Winnibigoshish	12.6	8.6	17.6	43.8	51.0	62.6	69.4	66.0	61.4	44.7	30.8	10.8	39.9
Hallock	7.0	2.6	17.8	47.3	50.5	63.1	65.8	65.6	61.6	42.0	27.2	1.8	37.7
Pembina	7.4	1.4	17.0	46.7	49.4	64.0	65.8	64.4	60.9	40.2	25.3	1.2	37.0
Kenora	9.6	1.9	16.3	44.2	47.2	62.4	67.8	65.2	59.3	39.1	27.1	5.7	37.2
Winnipeg	6.8	1.8	16.0	47.0	48.9	63.7	66.9	65.1	60.8	41.7	26.0	2.0	37.2

AVERAGE MONTHLY TEMPERATURE ON WATERSHED SUBDIVISIONS

Upper Rainy	12	4	14	42	48	60	64	62	58	40	27	8	36.6
Lower Rainy	13	6	17	44	49	62	67	64	60	43	29	9	38.6
Lake of Woods	10	3	16	44	48	62	67	64	60	41	28	6	37.4

1907

Port Arthur	2.4	7.2	21.8	28.2	37.5	56.8	62.9	58.8	51.3	39.4	28.8	17.4	34.4
Duluth	2.7	11.5	24.6	30.9	38.8	57.9	65.7	60.5	51.5	42.6	30.3	19.6	36.4
Mount Iron	1.0	11.2	23.8	29.7	40.1	61.1	63.8	61.6	52.8	40.0	27.6	16.3	35.8
Stephens Mine	− 0.4	.....	.....	.....	39.6	60.8	63.0	61.2	51.5	39.6	27.2	16.2	.....
International Falls	.....	2.7	.....	.....	.....	.....	.....	60.2	52.0	.....	.....	.....	.....
Pokegama Falls	− 1.2	10.4	22.8	30.8	41.8	61.1	65.0	63.5	53.4	42.4	29.0	17.6	36.4
Winnibigoshish	− 2.8	10.2	22.1	30.6	41.8	63.4	67.2	64.7	55.0	44.1	30.2	19.0	37.1
Blackduck	.....	9.8	21.8	30.1	42.0	62.0	64.4	61.2	52.8	42.7	27.9	16.2	.....
Hallock	−11.4	5.0	18.8	29.6	42.8	63.0	65.6	61.8	50.8	42.2	26.6	16.8	34.3
Pembina	−14.1	3.2	16.4	27.1	42.0	62.9	65.8	62.9	51.6	36.8	28.0	10.2	32.7
Kenora	− 8.9	4.9	19.3	25.7	35.3	61.8	67.1	59.2	49.5	37.1	25.0	17.4	32.8
Winnipeg	−11.4	4.6	17.3	28.2	39.7	61.8	67.2	61.5	50.8	41.4	25.5	14.2	33.4

AVERAGE MONTHLY TEMPERATURE ON WATERSHED SUBDIVISIONS

Upper Rainy	−2	6	20	28	39	60	64	60	51	39	26	14	33.8
Lower Rainy	−4	8	21	29	41	62	65	62	52	41	28	17	35.2
Lake of Woods	−7	5	19	27	39	62	66	60	50	39	27	17	33.6

* Formerly known as Koochiching.

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TABLE 2—Continued

MEAN MONTHLY TEMPERATURE ON OR NEAR WATERSHED

RECORDS OF U. S. WEATHER BUREAU AND CANADIAN METEOROLOGICAL SERVICE

1908

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Port Arthur	12.8	13.0	20.6	36.3	49.4	56.9	62.6	60.6	58.5	44.7	31.0	14.4	38.4
Duluth	14.9	16.2	23.2	38.8	47.6	56.6	63.6	62.1	60.4	45.8	32.4	16.0	39.8
Mount Iron	11.6	14.4	22.2	41.8	51.1	59.3	64.8	60.5	59.6	44.9	28.5	12.4	39.3
Stephens Mine	11.8	13.6	20.0	39.8	50.2	59.2	65.0	60.3	59.1	44.3	29.0	12.5	38.7
International Falls	10.0	12.0	.....	.....	.....	57.7	62.3	57.0	54.1	41.5	.....	9.5	.....
Pokegama Falls	12.4	15.2	23.0	42.9	50.6	60.6	67.0	61.8	60.8	45.7	31.1	13.4	40.4
Winnibigoshish	12.6	15.2	22.8	42.9	53.0	62.2	69.2	64.0	62.6	46.7	32.2	13.5	41.4
Hallock	9.8	9.7	12.3	42.4	51.6	61.6	66.8	62.3	59.4	43.8	28.8	11.1	38.3
Pembina	9.0	10.4	14.2	42.4	51.2	59.8	68.0	59.8	56.9	40.4	26.8	11.2	37.5
Kenora	8.2	11.3	.....	33.0	.....	.....	.....	.....	.....	.....	.....	9.6	.....
Winnipeg	7.8	8.7	9.6	40.0	52.2	62.1	66.9	62.2	58.3	43.3	28.4	10.0	37.5

AVERAGE MONTHLY TEMPERATURE ON WATERSHED SUBDIVISIONS

Upper Rainy	9	11	19	39	51	58	63	59	57	42	28	10	37.2
Lower Rainy	12	13	20	42	51	60	66	60	58	44	30	12	39.0
Lake of Woods	10	11	14	37	50	60	66	60	56	42	29	10	37.2

1909

Port Arthur	5.4	9.4	23.4	30.9	45.4	59.0	64.0	63.4	52.6	40.9	33.6	15.6	37.0
Duluth	10.0	12.8	24.8	32.0	44.8	59.1	64.0	64.6	54.9	42.5	33.6	12.4	38.0
Mount Iron	4.0	10.0	28.5	32.0	49.2	63.2	66.4	66.4	54.8	42.0	31.0	10.7	38.2
Stephens Mine	5.0	8.1	22.2	29.9	46.7	61.7	64.4	65.2	53.2	40.8	30.9	10.8	36.6
International Falls	−0.4	2.5	19.9	28.2	47.6	62.4	66.4	66.1	55.2	43.2	29.0	.....	.....
Pokegama Falls	5.8	8.4	21.9	30.9	50.1	63.4	66.4	66.6	55.6	42.0	30.8	8.6	37.5
Winnibigoshish	5.9	8.8	23.5	31.3	50.4	65.4	69.2	69.5	58.2	43.4	31.8	8.6	38.8
Kelliher	.....	8.5	22.9	29.7	51.2	63.1	67.2	66.8	57.0	42.2	29.2	7.1	.....
Baudette	0.7	3.7	21.3	30.0	48.0	64.6	66.5	66.4	55.6	42.0	28.7	6.7	36.2
Warroad	.....	.....	.....	.....	.....	.....	66.6	65.8	55.8	42.0	26.7	4.6	.....
Roseau	−0.6	2.5	19.2	30.8	50.8	62.8	65.6	65.4	57.2	43.1	27.4	5.2	35.8
Hallock	−1.0	4.0	18.8	34.1	53.0	63.5	67.6	67.8	58.4	42.7	26.6	2.0	36.5
Pembina	−3.4	0.0	20.4	31.6	49.8	62.4	67.2	67.2	56.2	39.8	26.7	−1.6	34.7
Kenora	−1.1	2.3	17.9	25.4	.....	.....	.....	.....	.....	38.7	24.2	5.9	.....
Winnipeg	−2.5	0.3	17.1	30.3	51.8	63.5	68.0	66.9	58.0	42.5	24.8	2.5	35.3

AVERAGE MONTHLY TEMPERATURE ON WATERSHED SUBDIVISIONS

Upper Rainy	1	5	21	29	47	61	65	64	53	40	29	8	35.3
Lower Rainy	3	6	22	30	49	63	66	66	56	42	30	8	36.8
Lake of Woods	0	3	19	27	48	63	67	66	56	40	26	6	35.1

1910

Port Arthur	11.0	7.1	33.7	39.9	44.9	62.5	64.2	60.3	53.6	43.5	26.6	13.0	38.4
Duluth	13.4	8.4	37.4	41.2	46.8	65.5	67.2	62.8	55.6	47.6	23.9	12.8	40.2
Mount Iron	10.2	5.8	38.4	46.0	48.0	66.2	66.4	61.6	55.3	46.4	23.0	9.7	39.8
International Falls	.....	2.2	.....	45.6	49.0	67.4	67.4	61.8	55.6	46.2	22.5	9.2	.....
Pokegama Falls	9.6	3.5	38.0	46.0	48.6	65.6	66.3	61.1	54.9	47.8	22.4	9.8	39.5
Winnibigoshish	11.7	5.4	39.0	47.4	51.1	68.3	70.0	59.8	57.5	48.0	23.0	10.4	41.0
Warroad	7.0	−0.2	35.2	43.5	48.2	66.2	66.2	57.8	54.4	46.2	20.2	7.0	37.6
Hallock	5.4	−0.8	36.8	44.4	49.2	68.4	68.2	63.8	55.4	46.2	19.6	7.4	38.7
Pembina	2.2	0.8	34.5	43.2	48.1	68.8	66.4	60.0	52.0	45.5	26.1	4.0	37.6
Kenora	4.7	−1.2	28.6	37.3	40.4	65.8	72.2	66.0	49.2	40.6	16.7	5.1	35.5
Winnipeg	5.4	−1.3	34.1	42.9	48.9	68.4	68.7	62.2	54.3	46.8	19.9	5.9	38.0

AVERAGE MONTHLY TEMPERATURE ON WATERSHED SUBDIVISIONS

Upper Rainy	8	3	34	43	47	65	66	60	54	44	22	8	37.8
Lower Rainy	9	3	37	45	49	67	67	60	55	47	22	9	39.2
Lake of Woods	6	0	32	41	44	66	69	63	52	43	19	7	36.8

TABLE 2—Continued

MEAN MONTHLY TEMPERATURE ON OR NEAR WATERSHED

RECORDS OF U. S. WEATHER BUREAU AND CANADIAN METEOROLOGICAL SERVICE

1911

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Port Arthur	4.0	16.4	26.0	35.1	50.8	58.0	62.8	60.0	50.4	41.3	22.9	20.1	37.3
Duluth	4.9	16.6	28.4	38.2	51.3	59.3	64.6	61.0	53.2	41.9	21.4	20.2	38.4
Virginia	1.4	15.1	27.8	40.6	56.0	67.6	65.5	61.8	52.8	40.6	18.1	17.2	38.7
International Falls	— 2.1	14.9	28.4	39.6	56.0	67.5	65.8	61.6	53.4	43.2	18.2	17.2	38.6
Pokegama Falls	0.6	12.5	28.8	40.8	56.2	65.8	64.8	61.0	53.0	41.2	18.6	17.3	38.4
Winnibigoshish	1.6	12.8	29.2	42.0	57.7	68.6	67.8	63.8	55.0	42.8	19.2	17.6	39.8
Warroad	— 5.2	10.4	25.4	41.4	55.2	65.8	64.3	61.0	50.1	41.4	16.6	14.0	36.7
Hallock	— 7.9	4.3	23.4	41.1	55.7	66.2	63.6	62.4	53.4	43.4	15.3	10.8	36.0
Pembina	—12.3	0.8	20.0	39.1	54.2	65.5	63.7	61.7	52.0	42.2	.....	8.8	.....
Kenora	— 9.5	.....	15.9	35.4	47.9	62.8	65.7	61.1	47.2	39.6	15.3	11.8	.....
Winnipeg	—10.1	6.5	23.5	41.4	55.1	65.4	64.2	63.0	52.4	42.9	17.9	12.4	36.2

AVERAGE MONTHLY TEMPERATURE ON WATERSHED SUBDIVISIONS

Upper Rainy	— 1	13	26	38	54	64	64	60	51	40	17	15	36.8
Lower Rainy	— 1	13	28	41	56	67	65	62	53	42	18	16	38.3
Lake of Woods	— 7	10	21	38	52	64	65	61	49	41	16	13	35.3

1912

Port Arthur	— 7.7	8.5	15.2	34.5	45.2	57.0	60.4	57.5	54.6	43.8	30.4	15.5	34.6
Duluth	— 7.2	8.8	18.6	38.7	46.8	58.5	62.6	57.4	54.8	46.6	32.0	17.9	36.3
Virginia	—10.2	7.0	18.1	41.6	52.4	59.2	66.7	59.8	56.3	.....	30.8	16.6	.....
International Falls	— 9.4	7.2	16.9	41.1	52.8	62.4	67.4	60.4	55.4	46.6	31.4	16.2	37.4
Pokegama Falls	—11.8	5.5	16.0	42.3	52.8	58.2	65.9	59.4	55.3	45.0	30.5	16.6	36.3
Winnibigoshish	—10.0	8.0	17.2	43.4	54.6	61.4	68.2	62.6	56.2	46.7	33.6	17.2	38.3
Warroad	—13.2	3.8	13.2	39.4	49.9	60.7	66.2	59.0	48.4	39.4	29.1	12.2	34.0
Hallock	—12.4	6.2	15.6	42.4	54.4	62.7	65.8	61.2	53.2	44.2	30.8	14.7	36.6
Pembina	—16.2	7.0	15.6	42.6	51.2	61.4	66.0	61.8	50.8	41.5	24.4	7.0	34.4
Kenora	—15.3	0.8	10.3	36.3	47.7	64.1	57.5	56.4	49.4	38.1	28.2	10.9	32.0
Winnipeg	—11.5	6.5	15.3	41.2	53.6	64.5	65.3	60.3	53.4	43.8	28.8	12.5	36.1

AVERAGE MONTHLY TEMPERATURE ON WATERSHED SUBDIVISIONS

Upper Rainy	—11	5	15	38	50	60	64	58	54	43	29	13	34.8
Lower Rainy	—11	6	16	41	52	61	67	60	54	44	31	15	36.3
Lake of Woods	—13	3	13	38	49	63	62	58	51	41	29	13	33.9

1913

Port Arthur	4.0	3.0	14.3	37.5	44.6	60.0	60.9	61.2	52.4	39.5	33.2	25.0	36.3
Duluth	6.3	5.6	17.0	40.4	46.2	59.3	60.4	62.2	53.9	40.7	35.6	26.7	37.9
Stephens Mine	4.6	3.0	15.2	43.7	49.2	62.4	62.4	64.2	54.3	39.2	.....	23.2	.....
International Falls	1.2	4.4	15.6	45.4	50.2	66.4	64.4	65.8	56.2	38.9	33.6	22.8	38.7
Little Fork	—1.0	0.2	12.0	43.3	47.6	66.8	61.5	63.8	54.8	37.0	32.7	22.0	36.7
Pokegama Falls	1.6	3.6	14.0	43.2	48.6	64.2	63.3	65.0	54.4	39.5	34.5	24.3	38.0
Winnibigoshish	1.8	3.4	15.2	44.4	49.7	65.3	66.1	67.8	56.9	40.8	32.5	25.6	39.1
Warroad	—4.8	1.0	11.8	45.2	48.8	64.3	63.4	64.9	55.5	38.2	33.4	20.8	36.9
Hallock	—3.0	1.4	10.6	47.4	50.3	65.6	65.1	67.3	57.3	38.3	32.0	20.0	37.7
Pembina	—9.5	4.6	6.4	43.6	48.8	64.0	64.7	66.6	55.2	40.2	27.0	19.8	36.0
Kenora	—6.4	—4.2	11.1	39.6	44.3	62.3	60.0	60.3	49.1	33.8	29.5	16.8	33.0
Keewatin	.....	.....	.....	.....	.....	59.9	61.3	62.3	55.0	37.8	31.6	20.2	.....
Winnipeg	—6.7	—0.8	9.7	46.2	50.0	64.9	64.4	65.2	55.7	36.7	31.0	19.1	36.3

AVERAGE MONTHLY TEMPERATURE ON WATERSHED SUBDIVISIONS

Upper Rainy	1	0	13	41	48	63	62	62	53	37	30	21	35.9
Lower Rainy	0	2	14	44	49	65	63	65	55	39	33	23	37.7
Lake of Woods	—4	—1	12	42	46	63	62	63	54	37	32	19	35.4

TABLE 2—Continued

MEAN MONTHLY TEMPERATURE ON OR NEAR WATERSHED

RECORDS OF U. S. WEATHER BUREAU AND CANADIAN METEOROLOGICAL SERVICE

1914

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Port Arthur	12.7	0.9	21.0	32.0	52.3	58.1	63.5	59.6	54.5	46.5	29.3	11.5	36.82
Savanne	10.9	— 9.6	11.1	27.8	51.4	58.1	63.4	57.1	50.8	45.2	21.5	2.2	32.49
Ignace	.....	— 7.1	15.1	30.1	51.6	58.7	67.4	59.6	53.5	47.3	22.4	3.4	.....
Duluth	15.4	2.7	23.2	33.6	53.2	57.0	65.4	62.0	56.0	49.2	29.8	9.4	38.08
Stephens Mine	10.4	— 1.6	21.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Virginia	12.3	— 0.8	22.5	36.8	55.2	62.1	70.0	62.9	56.3	50.2	27.4	7.9	38.56
Winton	8.4	— 5.7	20.2	33.6	55.9	65.0	71.6	64.8	57.6	48.5	25.8	5.3	37.58
International Falls	11.6	— 1.7	23.5	35.8	55.8	63.1	70.8	63.4	57.4	51.2	28.5	6.5	38.82
Fort Frances	.....	.....	25.2	39.3	57.9	66.4	72.2	64.1	57.4	49.5	34.6	6.7	.....
Little Fork	11.0	— 4.0	.....	.....	55.4	62.0	69.9	60.6	57.0	49.6	29.2	6.2	.....
Pokegama Falls	12.5	— 2.6	21.4	36.4	55.0	59.6	68.8	62.3	56.8	50.2	29.1	7.5	38.08
Winnibigoshish	12.9	— 1.4	23.0	38.0	56.7	63.6	70.2	64.4	58.4	50.0	29.0	8.8	39.45
Baudette	11.2	— 3.6	22.3	35.8	55.2	63.3	70.9	62.6	57.0	50.4	27.7	6.3	38.26
Warroad	11.5	— 5.9	20.8	34.4	55.0	64.2	69.6	64.2	59.4	51.8	29.5	6.8	38.43
Hallock	8.6	— 8.8	23.0	38.2	56.0	63.2	71.6	63.9	60.0	51.7	27.2	0.2	37.86
Roseau	11.1	— 8.6	21.0	35.0	54.5	61.5	68.9	60.8	57.0	49.0	27.2	2.6	36.66
Pembina	2.0	—10.5	13.3	37.2	58.4	64.4	72.0	61.2	58.0	49.8	25.6	—3.6	35.65
Kenora	5.9	— 8.5	.....	.....	.....	.....	.....	.....	.....	.....	24.6	2.0	.....
Keewatin	4.6	— 4.6	19.6	32.1	50.7	60.3	68.2	.....	.....	49.9	27.7	4.3	.....
Winnipeg	7.7	— 8.8	20.7	36.1	55.2	63.2	72.3	62.7	57.0	51.0	26.0	1.2	40.39

AVERAGE MONTHLY TEMPERATURE ON WATERSHED SUBDIVISIONS

Upper Rainy	10	—6	18	33	54	61	68	61	55	48	26	5	36.1
Lower Rainy	11	—4	22	36	56	63	70	63	57	50	28	6	38.2
Lake of Woods	8	—6	21	34	53	62	69	64	57	50	28	5	37.1

1915

Port Arthur	9.2	20.0	25.5	43.2	47.5	53.6	60.5	61.0	53.3	43.0	32.2	19.5	39.04
Savanne	0.1	13.7	16.1	42.8	46.6	51.7	60.7	57.7	50.4	39.5	25.0	11.6	34.66
Ignace	—1.5	11.7	19.0	43.7	47.1	52.9	59.9	59.9	53.4	40.8	26.0	10.0	35.24
Duluth	9.2	20.6	25.0	45.4	44.2	53.2	59.8	61.6	55.6	44.8	29.9	18.6	38.99
Virginia	6.2	19.8	26.0	50.1	49.0	57.4	62.9	62.4	55.4	44.7	28.5	16.6	39.92
Winton	3.8	17.5	23.8	51.0	.....	57.0	63.2	64.1	55.7	45.4	29.1	.....	.....
International Falls	4.5	20.1	25.0	49.4	51.7	56.7	62.8	64.0	56.4	46.2	29.4	15.4	40.13
Fort Frances	4.5	20.3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Little Fork	0.1	15.0	21.0	48.6	50.2	56.0	62.4	61.5	54.6	.....	27.2	13.4	.....
Pokegama Falls	4.6	18.5	24.6	49.1	49.0	56.2	61.4	60.6	55.6	45.6	28.2	15.8	39.10
Winnibigoshish	5.6	20.4	26.6	50.3	49.8	57.6	64.4	63.3	57.6	47.6	29.0	18.9	40.92
Baudette	3.2	18.8	23.7	49.2	51.0	56.7	62.4	63.2	55.3	44.8	26.5	13.2	39.00
Warroad	3.0	19.2	24.2	49.0	52.0	58.4	64.0	65.7	56.4	46.8	26.2	13.6	39.87
Hallock	—0.6	14.3	22.5	49.9	52.4	57.4	62.8	64.7	56.2	45.6	25.4	11.6	38.52
Roseau	—0.4	16.0	22.0	49.6	49.4	55.5	60.8	61.7	53.8	43.8	24.4	11.8	37.37
Pembina	2.3	14.2	20.0	49.1	54.0	58.8	63.4	65.9	56.0	48.6	24.6	11.8	39.06
Kenora	—1.2	16.4	19.9	40.0	47.4	51.9	.....	.....	.....	.....	.....	.....	.....
Keewatin	0.8	17.3	23.0	45.5	51.0	57.6	62.9	65.8	56.1	45.2	29.3	16.1	39.22
Indian Bay, Shoal Lake	.....	.....	.....	43.9	51.9	55.4	60.7	63.0	53.0	42.4	26.1	11.0	.....
Winnipeg	0.4	14.6	23.0	48.9	52.8	56.9	62.8	66.3	54.7	44.8	24.5	11.7	38.45

AVERAGE MONTHLY TEMPERATURE ON WATERSHED SUBDIVISIONS

Upper Rainy	1	15	21	47	48	55	62	61	54	43	27	13	37.2
Lower Rainy	3	19	25	49	50	57	63	63	56	46	28	15	39.5
Lake of Woods	1	17	22	47	51	56	62	63	55	44	27	13	38.2

TABLE 3

METEOROLOGICAL DATA—UPPER RAINY WATERSHED

SUMMARY OF MONTHLY PRECIPITATION

Date.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
1885	0.3	0.4	1.0	2.1	1.5	3.4	3.7	1.8	1.7	*0.6	1.3	0.6	18.4
1886	1.6	1.7	0.6	1.8	0.8	2.6	*1.3	*1.0	4.1	2.6	1.8	0.7	20.6
1887	0.9	1.3	0.5	1.3	2.5	3.3	4.1	2.1	2.0	2.4	1.5	1.5	23.4
1888	1.4	1.0	1.3	1.5	2.5	4.0	2.9	2.4	1.6	2.4	1.8	0.2	23.0
1889	†2.4	1.5	1.2	1.4	2.2	1.6	3.8	3.2	3.3	1.2	1.4	†2.1	25.3
1890	2.0	1.3	1.1	1.4	2.2	4.0	3.4	3.1	3.6	2.4	0.9	0.8	26.2
1891	1.0	1.7	1.2	2.4	3.0	4.0	4.3	3.1	4.2	1.6	0.8	1.7	29.0
1892	0.6	0.7	1.0	2.7	4.4	2.4	3.2	6.0	1.9	0.8	1.3	0.4	25.4
1893	1.5	1.7	1.5	2.7	1.9	4.0	4.5	2.6	1.4	1.3	1.0	1.1	25.2
1894	1.0	0.4	2.1	†4.3	2.8	3.6	1.8	1.3	3.2	†4.9	1.5	0.9	27.8
1895	0.8	0.6	*0.4	2.6	4.1	5.2	3.3	2.4	3.0	1.1	1.7	1.3	26.5
1896	0.9	0.9	1.4	2.2	†5.3	3.1	3.7	4.0	1.9	2.0	2.0	0.7	28.1
1897	1.3	†1.9	1.5	*0.3	1.6	2.9	†7.0	3.9	*1.0	1.7	1.1	1.0	25.2
1898	0.6	0.8	1.0	0.6	2.4	†7.7	6.0	2.2	4.3	2.9	1.5	0.4	30.4
1899	1.0	0.5	0.9	1.5	3.0	4.2	3.6	4.3	3.4	2.5	0.5	0.7	26.1
1900	1.0	*0.3	*0.4	0.5	*0.7	1.9	3.3	†6.7	†6.2	3.3	0.7	0.5	25.5
1901	0.5	0.3	1.6	1.3	1.2	5.9	4.0	3.0	2.3	2.2	1.2	0.8	24.3
1902	0.5	*0.2	1.0	1.4	4.6	2.9	2.8	4.0	2.9	2.4	1.7	1.7	26.1
1903	1.1	0.8	0.7	1.7	2.7	1.4	3.4	3.4	4.9	3.7	1.3	1.2	26.3
1904	0.4	0.9	†2.2	0.7	2.1	3.2	4.7	2.5	3.8	1.7	0.5	1.3	24.0
1905	0.4	0.4	1.9	2.0	2.6	5.5	6.0	3.0	4.6	2.2	1.9	*0.2	[1]30.7
1906	0.6	0.3	0.6	1.0	4.2	4.0	2.7	3.4	2.2	1.4	†2.8	1.2	24.4
1907	1.8	0.6	1.3	1.3	1.4	2.3	3.9	4.4	3.0	1.3	0.7	0.3	22.3
1908	*0.2	1.4	1.0	2.0	3.8	4.5	2.7	2.7	1.5	1.3	1.0	1.1	23.2
1909	1.5	0.6	0.8	1.0	2.0	1.5	4.4	5.5	2.8	2.6	1.8	1.7	26.2
1910	0.4	0.6	*0.4	2.2	1.3	*0.7	3.3	1.3	3.2	2.4	1.2	0.6	[2]17.6
1911	0.7	1.1	0.9	0.9	2.6	4.1	3.3	4.5	2.8	1.0	1.4	1.2	24.5
1912	0.3	0.3	*0.4	2.1	3.6	2.2	3.2	3.1	5.1	1.5	*0.3	0.8	22.9
1913	0.4	0.6	1.1	1.2	3.8	2.9	5.8	3.5	2.7	2.9	1.0	*0.2	26.1
Mean	0.93	0.85	1.07	1.66	2.75	3.42	3.70	3.25	3.05	2.08	1.30	0.93	24.99
*Minimum month	0.2	0.2	0.4	0.3	0.7	0.7	1.3	1.0	1.0	0.6	0.3	0.2	6.9
†Maximum month	2.4	1.9	2.2	4.3	5.3	7.7	7.0	6.7	6.2	4.9	2.8	2.1	53.5

SUMMARY OF MONTHLY MEAN TEMPERATURE

1885	— 8	— 2	9	36	49	59	65	59	50	37	26	12	32.5
1886	— 3	3	18	38	53	60	66	61	*47	43	20	1	33.9
1887	— 7	2	15	35	†58	63	66	59	50	*33	19	7	33.3
1888	— 9	3	9	32	43	61	65	60	49	37	25	14	32.4
1889	10	1	27	38	47	60	63	61	49	36	22	17	36.1
1890	2	8	14	38	43	63	65	58	50	41	27	14	35.2
1891	11	3	16	41	49	59	*58	59	57	41	19	20	36.1
1892	— 1	9	18	31	44	57	64	61	53	43	17	4	33.3
1893	— 4	— 1	15	29	47	†65	65	60	53	39	21	*—1	32.3
1894	2	5	23	38	49	†65	†67	63	55	42	18	17	37.0
1895	— 2	4	14	41	52	59	61	60	54	35	21	10	34.1
1896	5	8	12	37	55	60	63	60	49	36	*13	12	34.3
1897	1	8	16	36	48	*55	†67	58	†58	42	17	4	34.2
1898	7	7	22	32	48	59	64	60	55	38	21	6	34.9
1899	— 1	— 2	*6	37	49	59	63	62	49	43	†33	11	34.1
1900	11	— 2	14	†44	53	61	61	†68	53	†49	21	11	37.0
1901	4	2	18	39	53	60	†67	63	51	42	21	7	35.6
1902	8	10	28	36	52	56	66	59	50	40	28	7	36.7
1903	3	4	22	37	52	57	62	*56	50	44	19	1	33.9
1904	— 4	*— 5	15	32	48	59	59	58	49	40	30	6	[4]32.2
1905	— 1	3	22	35	47	58	63	62	56	38	25	14	35.2
1906	†12	4	14	42	48	60	64	62	†58	40	27	8	36.6
1907	— 2	6	20	*28	*39	60	64	60	51	39	26	14	33.8
1908	9	11	19	39	51	58	63	59	57	42	28	10	37.2
1909	1	5	21	29	47	61	65	64	53	40	29	8	35.3
1910	8	3	†34	43	47	†65	66	60	54	44	22	8	[3]37.8
1911	— 1	†13	26	38	54	64	64	60	51	40	17	15	36.8
1912	*—11	5	15	38	50	60	64	58	54	43	29	13	34.8
1913	1	0	13	41	48	63	62	62	53	37	30	†21	35.9
Mean	1.4	4.0	17.8	36.5	49.1	60.2	63.8	60.4	52.3	40.1	23.1	10.0	34.9
*Minimum month	—11	— 5	6	28	39	55	58	56	47	33	13	— 1	26.5
†Maximum month	12	13	34	44	58	65	67	68	58	49	33	21	43.5

[1] Maximum annual precipitation (1905)..... 30.7
[2] Minimum annual precipitation (1910)..... 17.6
[3] Maximum annual temperature (1910)..... 37.8
[4] Minimum annual temperature (1904)..... 32.2

TABLE 4

METEOROLOGICAL DATA—LOWER RAINY WATERSHED

SUMMARY OF MONTHLY PRECIPITATION

Date	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
1885	0.4	0.3	0.7	2.0	1.6	4.0	3.5	1.5	1.6	0.7	1.1	0.5	17.9
1886	1.3	1.0	0.5	3.1	1.7	3.0	2.2	1.2	3.4	1.8	1.8	0.5	21.5
1887	0.9	0.8	0.5	1.3	3.1	4.5	4.4	2.1	1.0	1.9	0.6	1.5	22.6
1888	1.1	0.3	1.4	1.6	2.2	5.0	3.7	*1.1	1.6	1.9	0.9	0.3	21.1
1889	1.3	1.3	0.9	1.3	1.3	1.6	3.8	4.2	2.8	0.5	1.2	1.7	21.9
1890	1.5	0.9	1.1	1.3	2.1	5.2	3.0	2.7	4.4	2.7	0.5	0.3	25.7
1891	0.8	1.7	1.0	1.9	1.8	5.0	4.6	2.7	3.9	1.6	0.8	†1.9	27.7
1892	0.5	0.6	1.2	2.7	4.5	2.0	2.5	4.4	1.7	*0.3	1.1	0.3	21.8
1893	1.4	1.4	1.4	3.2	2.4	4.0	4.7	3.2	1.6	1.3	0.9	0.8	26.3
1894	0.8	0.4	†2.5	†4.3	2.7	3.8	*1.2	1.8	2.8	†3.8	1.0	1.0	26.1
1895	0.6	0.4	*0.2	2.1	3.9	6.9	3.7	2.5	3.2	0.6	1.4	0.7	26.2
1896	0.9	0.5	1.5	3.9	†6.4	3.2	2.3	3.3	2.0	2.5	2.4	0.9	29.8
1897	†2.1	†1.9	1.6	*0.5	1.5	3.6	†7.6	3.0	*0.9	1.7	0.8	0.7	25.9
1898	0.4	0.7	1.0	0.8	2.6	6.8	5.0	2.2	3.0	2.7	1.1	0.3	26.6
1899	0.8	0.5	0.8	1.9	4.1	5.1	4.5	4.7	2.6	2.8	0.5	0.7	29.0
1900	0.8	0.4	0.4	0.6	*0.7	1.6	3.4	†7.3	†6.6	3.3	0.8	0.5	26.4
1901	0.3	0.3	1.9	1.5	1.0	†7.0	3.3	2.6	2.2	2.5	0.8	0.6	24.0
1902	0.3	0.4	1.2	1.1	4.9	2.8	3.4	3.8	2.2	1.8	1.5	1.4	24.9
1903	0.8	0.7	0.9	2.0	3.7	1.6	2.4	4.0	5.2	3.1	1.1	1.3	26.8
1904	0.3	0.9	2.4	0.9	1.6	3.3	4.7	2.0	3.7	1.8	0.4	1.2	23.2
1905	0.4	*0.2	1.7	1.8	3.9	6.6	6.0	3.8	4.3	2.1	1.8	0.2	[1] 32.8
1906	0.7	*0.2	0.6	1.2	4.2	4.1	2.3	3.1	2.3	1.2	†2.7	1.3	23.9
1907	1.8	0.4	1.0	1.2	1.6	2.6	3.4	3.8	2.7	1.2	0.6	0.3	20.6
1908	*0.2	1.2	1.3	1.7	4.6	4.6	2.9	2.3	1.8	1.4	0.8	0.7	23.5
1909	1.3	0.5	0.7	1.0	2.2	1.8	4.3	5.5	3.6	3.0	1.6	1.3	26.8
1910	0.3	0.5	0.5	1.9	1.8	*1.2	3.0	1.3	3.0	1.9	0.9	0.7	[2] 17.0
1911	0.6	1.0	0.9	0.9	2.9	3.9	3.0	5.0	2.6	0.9	1.3	1.0	24.0
1912	*0.2	0.3	0.3	1.6	3.0	1.6	3.7	3.3	4.6	1.0	*0.3	0.7	20.6
1913	0.3	0.6	1.0	1.5	3.3	3.1	6.1	3.4	2.4	2.8	0.7	*0.1	25.3
Mean	0.79	0.70	1.07	1.75	2.80	3.78	3.75	3.17	2.89	1.89	1.08	0.80	24.47
*Minimum month	0.2	0.2	0.2	0.5	0.7	1.2	1.2	1.1	0.9	0.3	0.3	0.1	6.9
†Maximum month	2.1	1.9	2.5	4.3	6.4	7.0	7.6	7.3	6.6	3.8	2.7	1.9	54.1

SUMMARY OF MONTHLY MEAN TEMPERATURE

1885	— 7	— 2	14	37	50	59	65	*59	52	39	29	14	34.1
1886	— 2	5	20	38	55	61	67	63	*49	44	22	3	35.4
1887	— 5	2	17	36	†58	63	67	61	52	*35	21	7	34.5
1888	— 8	4	11	34	44	62	66	61	52	40	27	17	34.2
1889	12	2	30	41	48	61	65	64	51	39	24	17	37.8
1890	2	6	15	41	45	65	67	*59	52	42	30	17	36.8
1891	†14	4	17	44	51	60	*61	61	59	43	21	18	37.8
1892	1	10	20	34	45	59	66	63	56	45	20	5	35.3
1893	— 2	— 1	16	30	49	66	66	62	54	41	22	*1	[4] 33.7
1894	2	6	25	41	51	†67	†69	66	56	43	19	19	38.7
1895	— 1	5	18	46	53	59	63	61	54	38	22	12	35.8
1896	4	9	14	38	56	63	65	61	50	37	*12	14	35.3
1897	1	8	15	39	51	*57	68	60	†60	44	19	5	35.6
1898	8	9	22	37	49	61	66	62	55	39	22	6	36.3
1899	— 2	— 2	*10	39	50	61	66	63	52	44	†35	13	35.8
1900	12	— 1	17	†47	56	63	64	†69	55	†51	21	13	38.9
1901	5	3	20	41	55	60	†69	65	53	46	23	8	37.4
1902	11	11	30	38	54	58	67	61	51	43	28	8	38.3
1903	4	5	23	39	53	60	64	*59	51	46	20	3	35.6
1904	— 3	*— 6	17	34	51	60	*61	60	51	43	32	9	33.9
1905	0	2	27	37	49	59	65	64	58	38	28	13	36.7
1906	13	6	17	44	49	62	67	64	†60	43	29	9	38.6
1907	— 4	8	21	*29	*41	62	65	62	52	41	28	17	35.2
1908	12	†13	20	42	51	60	66	60	58	44	30	12	39.0
1909	3	6	22	30	49	63	66	66	56	42	30	8	36.8
1910	9	3	†37	45	49	†67	67	60	55	47	22	9	[3] 39.2
1911	— 1	†13	28	41	56	†67	65	62	53	42	18	16	38.3
1912	*—11	6	16	41	52	61	67	60	54	44	31	15	36.3
1913	0	2	14	44	49	65	63	65	55	39	33	†23	37.7
Mean	2.3	4.7	19.8	38.8	50.6	61.7	65.6	62.2	54.0	42.1	24.7	11.4	36.5
*Minimum month	—11	— 6	10	29	41	57	61	59	49	35	12	1	28.1
†Maximum month	14	13	37	47	58	67	69	69	60	51	35	23	45.25

[1] Maximum annual precipitation (1905) 32.8
[2] Minimum annual precipitation (1910) 17.0
[3] Maximum annual temperature (1910) 39.2
[4] Minimum annual temperature (1893) 33.7

TABLE 5

METEOROLOGICAL DATA—LAKE OF THE WOODS (PROPER) WATERSHED

SUMMARY OF MONTHLY PRECIPITATION

Date.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
1885	0.3	*0.3	0.8	2.1	1.8	3.1	3.3	1.7	0.9	0.7	1.0	0.8	16.8
1886	1.1	0.9	0.4	2.0	*0.5	2.1	2.1	*0.9	2.6	1.2	1.5	0.3	[2] 15.6
1887	0.7	0.9	0.5	1.3	2.8	3.8	3.6	1.7	0.8	1.1	0.5	0.8	18.5
1888	1.0	*0.3	1.0	1.1	1.7	4.0	3.3	1.1	1.4	1.6	0.7	0.4	17.6
1889	1.2	1.2	0.6	0.6	1.7	1.2	3.2	2.3	3.5	0.9	1.6	2.0	20.0
1890	†2.5	1.0	1.3	1.5	2.1	3.9	4.2	3.0	3.8	2.8	0.4	0.4	26.9
1891	0.8	†1.6	1.0	2.2	2.0	5.5	3.6	3.2	3.3	1.6	0.9	1.5	27.2
1892	0.5	0.5	0.9	2.4	3.0	2.2	3.2	5.0	1.2	0.6	1.1	0.2	20.8
1893	1.5	1.4	1.0	2.7	2.2	4.6	4.0	1.9	1.2	1.3	1.1	0.8	23.7
1894	0.9	0.5	1.9	†3.9	1.8	2.9	*1.1	1.3	2.1	3.0	1.4	0.7	21.5
1895	0.9	0.5	0.4	1.6	3.0	5.1	2.6	2.0	2.8	0.7	1.3	1.0	21.9
1896	0.8	0.6	1.5	3.6	†5.9	3.3	2.0	2.6	1.4	1.5	†2.2	0.6	26.0
1897	1.4	1.5	1.5	*0.5	1.5	2.5	†6.5	2.4	*0.4	1.5	0.7	0.6	20.0
1898	0.5	0.8	1.4	1.0	1.4	†6.5	4.0	2.0	3.0	2.7	1.4	0.4	25.1
1899	1.2	0.4	0.8	1.8	2.0	2.7	3.0	3.0	1.2	1.9	0.5	0.5	19.0
1900	1.1	0.4	0.5	0.6	*0.5	1.5	4.0	†6.5	†5.5	†3.4	1.1	0.7	25.8
1901	0.9	0.4	0.8	1.0	1.0	4.8	2.9	3.2	2.0	1.5	0.6	0.8	19.9
1902	*0.2	0.5	1.4	1.1	4.0	3.3	3.4	2.4	2.0	1.5	0.9	1.1	21.8
1903	0.9	0.5	1.0	1.4	3.3	1.8	2.5	3.6	4.4	1.8	0.9	1.2	23.3
1904	0.3	0.8	†2.3	1.0	1.8	3.2	5.0	2.0	3.2	1.0	0.4	1.3	22.3
1905	0.3	*0.3	1.6	0.7	3.1	5.5	4.2	3.7	3.5	2.0	1.4	0.2	26.5
1906	1.0	*0.3	*0.3	1.3	3.7	4.5	1.5	4.6	1.3	*0.5	2.1	1.5	22.6
1907	2.2	0.5	1.1	1.1	0.7	2.8	4.3	4.8	2.7	0.9	0.6	0.2	21.9
1908	0.3	1.2	0.9	1.4	3.5	3.7	2.0	2.8	1.8	1.8	0.6	0.6	20.6
1909	1.0	*0.3	0.8	0.8	2.3	2.2	3.9	4.0	3.0	2.7	1.6	†2.5	25.1
1910	*0.2	0.4	1.6	2.4	1.7	*0.9	*1.1	1.5	3.1	2.6	1.2	0.8	17.5
1911	0.8	1.1	0.4	1.6	3.3	3.5	3.7	4.8	2.6	1.5	1.2	1.1	25.6
1912	*0.2	*0.3	0.4	2.5	4.1	2.2	5.8	3.7	5.4	2.5	*0.2	0.5	[1] 27.8
1913	0.5	0.6	0.7	0.8	2.0	3.0	4.2	3.8	1.5	2.7	0.9	*0.1	20.8
Mean	0.87	0.69	0.99	1.58	2.36	3.32	3.38	2.95	2.47	1.71	1.03	0.81	22.16
*Minimum month	0.2	0.3	0.3	0.5	0.5	0.9	1.1	0.9	0.4	0.5	0.2	0.1	5.9
†Maximum month	2.5	1.6	2.3	3.9	5.9	6.5	6.5	6.5	5.5	3.4	2.2	2.5	49.3

SUMMARY OF MONTHLY MEAN TEMPERATURE

1885	— 10	— 4	11	35	49	60	65	*58	52	37	27	11	32.7
1886	— 8	1	17	40	53	62	†69	63	*48	44	19	— 1	33.8
1887	— 10	— 4	14	36	†56	63	64	60	53	*33	19	3	32.2
1888	— 11	0	8	32	44	62	66	60	52	39	25	15	32.7
1889	9	— 1	28	40	48	62	65	65	49	39	24	12	36.6
1890	— 6	— 2	11	38	43	67	67	59	50	41	30	16	34.5
1891	†11	— 3	12	42	49	60	*61	61	56	40	18	13	35.0
1892	— 3	3	18	31	44	59	65	62	53	42	16	1	32.6
1893	— 5	— 6	10	*27	49	65	66	61	52	37	18	* 5	[4] 30.7
1894	— 4	3	21	38	51	†68	†69	65	53	39	18	16	36.4
1895	— 5	2	15	46	52	58	63	61	52	36	19	9	34.0
1896	1	7	12	36	54	63	64	60	49	36	* 8	12	33.6
1897	0	4	12	38	51	58	68	61	†60	44	17	5	34.8
1898	6	7	18	37	49	60	65	62	54	38	21	5	35.1
1899	— 4	— 5	* 5	36	48	61	66	63	51	43	†35	11	34.1
1900	9	— 4	14	†47	†56	63	64	†68	55	†49	20	11	[3] 37.7
1901	6	2	19	40	55	60	†69	65	52	45	22	7	36.9
1902	8	†11	29	36	53	*57	68	60	51	42	26	6	37.3
1903	3	2	21	38	53	61	64	60	50	46	22	2	35.2
1904	— 3	—*7	15	34	53	60	63	60	51	43	32	7	34.5
1905	— 2	3	23	36	48	58	64	64	58	39	27	14	36.0
1906	10	3	16	44	48	62	67	64	†60	41	28	6	37.4
1907	— 7	5	19	*27	*39	62	66	60	50	39	27	17	33.6
1908	10	†11	14	37	50	60	66	60	56	42	29	10	37.2
1909	0	3	19	27	48	63	67	66	56	40	26	6	35.1
1910	6	0	†32	41	44	66	†69	63	52	43	19	7	36.8
1911	— 7	10	21	38	52	64	65	61	49	41	16	13	35.3
1912	—*13	3	13	38	49	63	62	*58	51	41	29	13	33.9
1913	— 4	— 1	12	42	46	63	62	63	54	37	32	†19	35.4
Mean	—0.8	1.5	16.5	37.1	49.5	61.7	65.5	61.8	52.7	40.5	23.1	9.0	34.8
*Minimum month	— 13	— 7	5	27	39	57	61	58	48	33	8	— 5	25.9
†Maximum month	11	11	32	47	56	68	69	68	60	49	35	19	43.75

[1] Maximum annual precipitation (1912) 27.8
[2] Minimum annual precipitation (1886) 15.6
[3] Maximum annual temperature (1900) 37.7
[4] Minimum annual temperature (1893) 30.7

TABLE 6

WATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO

RECORDS OF JAMES C. KENNEDY

1892	October					November					December				
		Local Datum		Sea-level Datum			Local Datum		Sea-level Datum			Local Datum		Sea-level Datum	
	Footnote	Lake	Tail Water	Lake	Tail Water	Footnote	Lake	Tail Water	Lake	Tail Water	Footnote	Lake	Tail Water	Lake	Tail Water
1												99.80	82.50	1059.80	1042.50
2															
3													82.40		1042.40
4	1	100.57	84.34	1060.57	1044.34										
5															
6			84.43		1044.43							99.66	82.20	1059.66	1042.20
7															
8		100.81		1060.81											
9												99.55	82.10	1059.55	1042.10
10							100.30	83.30	1060.30	1043.30					
11															
12															
13												99.50	81.90	1059.50	1041.90
14													81.90		1041.90
15												99.50	81.90	1059.50	1041.90
16											3				
17							100.10	83.10	1060.10	1043.10		99.40	81.80	1059.40	1041.80
18															
19															
20															
21															
22							100.00	82.80	1060.00	1042.80					
23															
24						2						99.34	81.50	1059.34	1041.50
25							99.90	82.70	1059.90	1042.70					
26															
27															
28															
29															
30															
31															

On the Kennedy charts certain isolated records of water levels are presented, together with several notes the source or meaning of which is not quite clear. These notes are presented herewith verbatim. (Engrs.)

99.38 July/90 (C) 98.18 July/89 (C) Notes on July 15 referring to lake levels. (Engrs.)

79.50 July/90 (C) 77.33 July/89 (C) Notes on July 15 referring to tail water levels. (Engrs.)

100.25 Oct./91 by L. of the Woods M. Co. (C) Note presumably referring to lake level. (Engrs.)

⊙ 99.58 Jan/92 (C). Point shown as Jan. 15th and may refer to Brown record at E. L. Power House. (Engrs.)

105. Extra high-water mark. (S. C.) 104. Second high-water mark. (S. C.) These two notes appear on the small chart in a different hand from the rest of the chart. (Engrs.)

—— —— —— Height of water when Engineers visited in fall 1892. (S. C.) This line is shown at elevation 100.50. (Engrs.)

Zero line of filling deposited in channel. (S. C.) Shown at elevation 85. (Engrs.)

1. Oct. 4th and 8th 1892. 100.57 (Oct. 4th) 100.81 (Oct. 8) taken by W. Kennedy.

⊙ 84.34 (Spot on Oct. 4), 84.43 (Spot on Oct. 6th) by W. Kennedy Oct. 92. (C) These two notes refer to lake and tail water records respectively. (Engrs.)

2. ⊙ 99.50 as per Brown at E. L. Power Ho. (C)

3. ⊙ 99.00—16/12/92 as per Brown, E. L. Power Ho. (C). The elevations given by Brown are presumably at the Kenora Municipal Power Plant and are lower than lake level by the fall between lake and forebay. (Engrs.)

NOTES AND ABBREVIATIONS

(C.)—Indicates that the note appears on one of the large Kennedy charts.

(S. C.)—Indicates that the note appears on the small Kennedy chart.

(W.)—Indicates that the note appears in original papers and correspondence of Mr. Kennedy and was furnished by Mr. Stuart S. Scovil of the Water Power Branch, Department of the Interior, Canada.

(Engrs.)—Indicates that the note or comment has been added by the Consulting Engineers.

c.—The record for this date is considered erroneous, unreliable, or admitting of various interpretations.

e.—The record for this date appears on the Kennedy graphs as a pencil figure.

f.—The record for this date appears as a circle or dot on the Kennedy graphs without a pencil figure.

TABLE 6—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO

RECORDS OF JAMES C. KENNEDY

1893	JANUARY					FEBRUARY					MARCH				
	Footnote	Local Datum		Sea-level Datum		Footnote	Local Datum		Sea-level Datum		Footnote	Local Datum		Sea-level Datum	
		Lake	Tail Water	Lake	Tail Water		Lake	Tail Water	Lake	Tail Water		Lake	Tail Water	Lake	Tail Water
1												98.20	79.40	1058.20	1039.40
2															
3		99.10	81.10	1059.10	1041.10										
4															
5															
6															
7															
8															
9							98.45	79.70	1058.45	1039.70					
10		98.90	80.90	1058.90	1040.90							98.00	78.90	1058.00	1038.90
11															
12															
13															
14															
15											2	97.75	78.10	1057.75	1038.10
16															
17		98.80	80.50	1058.80	1040.50										
18							98.50		1058.50						
19								79.50		1039.50					
20															
21						1									
22															
23															
24															
25															
26															
27															
28															
29															
30															
31															

1893	APRIL				MAY				JUNE			
	Local Datum		Sea-level Datum		Local Datum		Sea-level Datum		Local Datum		Sea-level Datum	
	Lake	Tail Water	Lake	Tail Water	Lake	Tail Water	Lake	Tail Water	Lake	Tail Water	Lake	Tail Water
1												
2												
3					98.00	78.73	1058.00	1038.73		81.80		1041.80
4									99.35		1059.35	
5												
6									99.40		1059.40	
7												
8												
9	97.80		1057.80		98.30	79.80	1058.30	1039.80		82.30		1042.30
10												
11												
12												
13									99.75		1059.75	
14												
15					98.90	80.40	1058.90	1040.40				
16												
17												
18									99.80		1059.80	
19										82.58		1042.58
20												
21												
22									99.75	82.58	1059.75	1042.58
23												
24									100.18	82.67	1060.18	1042.67
25						81.30		1041.30				
26					99.20	81.40	1059.20	1041.40				
27					99.30	81.55	1059.30	1041.55	100.00	82.75	1060.00	1042.75
28												
29	97.88	78.60	1057.88	1038.60								
30					99.30		1059.30		100.00	82.75	1060.00	1042.75
31												

1. ⊙ 97.00 21/2/93 as per Brown record at E. L. Power House. (C)
2. March 15th Lowest 1893. (C)

TABLE 6—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO

RECORDS OF JAMES C. KENNEDY

1893	July					August					September				
	Footnote	Local Datum		Sea-level Datum		Footnote	Local Datum		Sea-level Datum		Footnote	Local Datum		Sea-level Datum	
		Lake	Tail Water	Lake	Tail Water		Lake	Tail Water	Lake	Tail Water		Lake	Tail Water	Lake	Tail Water
1	1														
2															
3		100.05	82.78	1060.05	1042.78										
4															
5															
6												99.50	82.20	1059.50	1042.20
7		100.00	82.82	1060.00	1042.82		100.00	83.00	1060.00	1043.00					
8															
9															
10															
11		100.25	83.00	1060.25	1043.00		100.00	82.82	1060.00	1042.82					
12															
13															
14	2	100.30	83.20	1060.30	1043.20										
15															
16															
17															
18															
19												99.20	81.75	1059.20	1041.75
20															
21	3	100.30	83.00	1060.30	1043.00										
22															
23															
24							100.10	82.50	1060.10	1042.50					
25															
26															
27												98.90	81.10	1058.90	1041.10
28															
29															
30															
31		100.30	83.05	1060.30	1043.05										

1893	October					November					December				
1											4	97.70	78.60	1057.70	1038.60
2													78.60		1038.60
3												97.60	78.50	1057.60	1038.50
4							98.10	79.90	1058.10	1039.90					
5															
6															
7		98.95	81.05	1058.95	1041.05								78.50		1038.50
8													78.40		1038.40
9		98.70	80.82	1058.70	1040.82								78.40		1038.40
10							98.00		1058.00						
11													78.30		1038.30
12												97.60	78.20	1057.60	1038.20
13		98.70	80.75	1058.70	1040.75										
14												97.50		1057.50	
15															
16							97.90	79.40	1057.90	1039.40			78.20		1038.20
17							97.82	78.90	1057.82	1038.90					
18		98.55	80.45	1058.55	1040.45		97.80	79.10	1057.80	1039.10			78.10		1038.10
19															
20							97.80	79.00	1057.80	1039.00					
21							97.70	78.80	1057.70	1038.80		97.40		1057.40	
22								78.80		1038.80					
23		98.70	80.00	1058.70	1040.00		97.80	78.70	1057.80	1038.70					
24													78.10		1038.10
25							97.70		1057.70						
26															
27													77.80		1037.80
28		98.70	80.00	1058.70	1040.00								77.80		1037.80
29													77.70		1037.70
30															
31															

1. Dotted line indicates water levels of 1893 as recorded by The L. of the W. Milling Co. (C). 2. July 14—83.20 Highest Water 1893 (C). Note referring to tail water level. (Engrs.) 3. July 21 Highest water 1893—100.33 (C). Note referring to lake level. (Engrs.) 4. Mean 97.50 (C). Note referring to lake level Dec. 1893. (Engrs.) Mean 78.30 (C). Note referring to tail water level Dec. 1893. (Engrs.) Head 17.30 (C). Note referring to Dec. 1893. (Engrs.)

TABLE 6—Continued
WATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO
RECORDS OF JAMES C. KENNEDY

1894	JANUARY					FEBRUARY					MARCH				
	Footnote	Local Datum		Sea-level Datum		Footnote	Local Datum		Sea-level Datum		Footnote	Local Datum		Sea-level Datum	
		Lake	Tail Water	Lake	Tail Water		Lake	Tail Water	Lake	Tail Water		Lake	Tail Water	Lake	Tail Water
1	1					2					3				
2		97.30	77.60	1057.30	1037.60			77.10		1037.10					
3			77.60		1037.60										
4													76.20		1036.20
5			77.50		1037.50		97.00	77.00	1057.00	1037.00					
6								77.00		1037.00					
7			77.50		1037.50			76.90		1036.90					
8			77.50		1037.50								76.20		1036.20
9							96.90		1056.90						
10		97.20		1057.20									76.10		1036.10
11			77.40		1037.40							96.70		1056.70	
12		97.20		1057.20				76.80		1036.80					
13			77.30		1037.30										
14													76.00		1036.00
15			77.20		1037.20										
16								76.70		1036.70			75.90		1035.90
17															
18												96.60		1056.60	
19															
20													75.90		1035.90
21															
22			77.20		1037.20			76.60		1036.60					
23													75.90		1035.90
24															
25															
26															
27			77.20		1037.20								75.80		1035.80
28		97.10		1057.10			96.70	76.30	1056.70	1036.30					
29															
30												96.53	75.70	1056.53	1035.70
31											4				

1894	APRIL					MAY					JUNE				
	Footnote	Local Datum		Sea-level Datum		Footnote	Local Datum		Sea-level Datum		Footnote	Local Datum		Sea-level Datum	
		Lake	Tail Water	Lake	Tail Water		Lake	Tail Water	Lake	Tail Water		Lake	Tail Water	Lake	Tail Water
1	5					7		78.15		1038.15	8	99.40	81.45	1059.40	1041.45
2								78.25		1038.25	9	99.45	81.50	1059.45	1041.50
3								78.50		1038.50					
4	6		75.60		1035.60		97.85	78.70	1057.85	1038.70		99.40		1059.40	
5								78.80		1038.80			81.50		1041.50
6												99.55		1059.55	
7							98.10	79.15	1058.10	1039.15		99.60	81.70	1059.60	1041.70
8								79.35		1039.35			81.85		1041.85
9		96.60		1056.60			98.20		1058.20			99.70	81.95	1059.70	1041.95
10								79.50		1039.50					
11								79.70		1039.70		99.74	82.10	1059.74	1042.10
12			75.80		1035.80		98.40	79.85	1058.40	1039.85					
13		96.56	75.80	1056.56	1035.80							99.90	82.30	1059.90	1042.30
14							98.50		1058.50				82.35		1042.35
15							98.50	80.10	1058.50	1040.10		100.00	82.45	1060.00	1042.45
16		96.60		1056.60				80.15		1040.15		99.95	82.55	1059.95	1042.55
17							98.40	80.10	1058.40	1040.10					
18		96.65	75.90	1056.65	1035.90			80.20		1040.20		100.10	82.60	1060.10	1042.60
19			76.05		1036.05		98.90	80.30	1058.90	1040.30		100.10	82.65	1060.10	1042.65
20		96.80	76.30	1056.80	1036.30						10	100.20	82.75	1060.20	1042.75
21			76.40		1036.40		98.95	80.60	1058.95	1040.60		100.44	82.90	1060.44	1042.90
22								80.70		1040.70		100.10	83.00	1060.10	1043.00
23		97.00	76.60	1057.00	1036.60		99.05	80.80	1059.05	1040.80			83.00		1043.00
24		97.10	76.80	1057.10	1036.80		99.12	80.90	1059.12	1040.90					
25			77.10		1037.10		99.10	81.00	1059.10	1041.00		100.35	83.10	1060.35	1043.10
26		97.27	77.25	1057.27	1037.25		99.20		1059.20			100.20	83.10	1060.20	1043.10
27			77.50		1037.50							100.30	83.20	1060.30	1043.20
28		97.40	77.70	1057.40	1037.70		99.30	81.20	1059.30	1041.20		100.25	83.25	1060.25	1043.25
29			77.80		1037.80		99.30	81.25	1059.30	1041.25		100.30	83.30	1060.30	1043.30
30		97.60	78.00	1057.60	1038.00		99.30	81.30	1059.30	1041.30		100.40	83.35	1060.40	1043.35
31							99.35	81.40	1059.35	1041.40					

1. Mean 97.20 (C). Note referring to lake level, Jan. 1894. (Engrs.) Mean 77.40 (C). Note referring to tail water level, Jan. 1894. (Engrs.) Av Head 19.80 (C). Note referring to Jan. 1894. (Engrs.) 2. Mean 96.85 (C). Note referring to lake level, Feb. 1894. (Engrs.) Mean 76.70 (C). Note referring to tail water level, Feb. 1894. (Engrs.) Av Head 20.10 (C). Note referring to Feb. 1894. (Engrs.) 3. Mean 96.50 (C). Note referring to lake level, Mar. 1894. Note very indistinct. (Engrs.) Mean 76.00 (C). Note referring to tail water level, Mar. 1894. (Engrs.) Av Head, 20.50 (C). Note referring to Mar. 1894. (Engrs.) 4. March 31st Lowest Head Water 1894 (C). Note very indistinct. (Engrs.) 5. Mean Level 96.80 (C). Note referring to lake level, April 1894. (Engrs.) Mean Level 76.24 (C). Note referring to tail water level, April 1894. Note very indistinct. (Engrs.) Av Head 20.56 (C). Note referring to April 1894. (Engrs.) 6. April 4th—75.60 Lowest Water 1894 (C). Note referring to tail water. (Engrs.)

7. Av Lake level for May 98.60 (C).
Av Tail water for May 80.04
18.56

8. Av lake level for June 100.00 (C).
Av Tail water for June 82.44
17.56 ft.

9. 99.96 average Lake Level for June (C). 10. High S.E. Winds (C).

TABLE 6—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO

RECORDS OF JAMES C. KENNEDY

1894	July					August					September				
	Footnote	Local Datum		Sea-level Datum		Footnote	Local Datum		Sea-level Datum		Footnote	Local Datum		Sea-level Datum	
		Lake	Tail Water	Lake	Tail Water		Lake	Tail Water	Lake	Tail Water		Lake	Tail Water	Lake	Tail Water
1	1					4									
2							100.15	83.20	1060.15	1043.20					
3		100.30	83.35	1060.30	1043.35			83.25		1043.25					
4		100.30	83.35	1060.30	1043.35			83.25		1043.25		99.68	82.37	1059.68	1042.37
5		100.40	83.40	1060.40	1043.40							99.68	82.35	1059.68	1042.35
6		100.33	83.35	1060.33	1043.35		100.18	83.20	1060.18	1043.20		99.55	82.25	1059.55	1042.25
7		100.40	83.40	1060.40	1043.40		100.20	83.20	1060.20	1043.20		99.55	82.25	1059.55	1042.25
8							100.00	83.10	1060.00	1043.10		99.48	82.10	1059.48	1042.10
9		100.43	83.45	1060.43	1043.45										
10			83.50		1043.50							99.35	82.00	1059.35	1042.00
11		100.45	83.50	1060.45	1043.50							99.45	82.00	1059.45	1042.00
12		100.45	83.50	1060.45	1043.50							99.50	82.00	1059.50	1042.00
13		100.40	83.47	1060.40	1043.47							99.60	82.00	1059.60	1042.00
14		100.40	83.50	1060.40	1043.50							99.40	82.00	1059.40	1042.00
15												99.40	82.00	1059.40	1042.00
16		100.45	83.55	1060.45	1043.55										
17	2	100.55	83.55	1060.55	1043.55							99.08	81.55	1059.08	1041.55
18												99.35	81.60	1059.35	1041.60
19		100.50	83.55	1060.50	1043.55							99.15	81.50	1059.15	1041.50
20		100.45	83.60	1060.45	1043.60							99.10	81.35	1059.10	1041.35
21		100.45		1060.45			99.95	82.80	1059.95	1042.80		99.10	81.35	1059.10	1041.35
22	3						100.00	82.80	1060.00	1042.80		99.00		1059.00	
23		100.45		1060.45			99.80		1059.80						
24		100.45	83.60	1060.45	1043.60		99.80	82.70	1059.80	1042.70		98.90	80.90	1058.90	1040.90
25		100.43	83.52	1060.43	1043.52		99.80	82.65	1059.80	1042.65		99.00	80.95	1059.00	1040.95
26												99.00	81.00	1059.00	1041.00
27		100.40	83.50	1060.40	1043.50		99.80	82.55	1059.80	1042.55		98.96	80.90	1058.90	1040.90
28							99.60	82.50	1059.60	1042.50		98.60	80.75	1058.60	1040.75
29							99.75	82.47	1059.75	1042.47		98.60	80.65	1058.60	1040.65
30							99.70	82.47	1059.70	1042.47					
31							99.80	82.46	1059.80	1042.46					

1894	October				November				December			
1	98.60	80.50	1058.60	1040.50		80.10		1040.10	98.00		1058.00	
2	98.50		1058.50		98.40	80.10	1058.40	1040.10				
3	98.65		1058.65		98.48	80.15	1058.48	1040.15	97.96	79.30	1057.96	1039.30
4	98.65	80.50	1058.65	1040.50								
5	98.60		1058.60		98.28	79.90	1058.28	1039.90	98.00		1058.00	
6	98.75		1058.75		98.48	80.10	1058.48	1040.10	97.95		1057.95	
7		80.40		1040.40	98.35	80.15	1058.35	1040.15	97.90		1057.90	
8	98.60	80.40	1058.60	1040.40	98.38	80.10	1058.38	1040.10		78.92		1038.92
9	99.00	80.70	1059.00	1040.70	98.10	80.00	1058.10	1040.00				
10	98.70	80.65	1058.70	1040.65	98.00	79.70	1058.00	1039.70	97.90		1057.90	
11	98.70	80.60	1058.70	1040.60						78.65		1038.65
12	98.65	80.55	1058.65	1040.55	98.50	80.10	1058.50	1040.10	97.90	78.45	1057.90	1038.45
13	98.70	80.50	1058.70	1040.50	98.35	79.85	1058.35	1039.85		78.35		1038.35
14		80.55		1040.55	98.40	79.90	1058.40	1039.90	97.90	78.35	1057.90	1038.35
15	98.75	80.50	1058.75	1040.50	98.20	79.90	1058.20	1039.90		78.25		1038.25
16	98.58	80.50	1058.58	1040.50	98.05	79.70	1058.05	1039.70		78.20		1038.20
17	98.48	80.40	1058.48	1040.40	98.00	79.70	1058.00	1039.70	97.80	78.15	1057.80	1038.15
18	98.50	80.40	1058.50	1040.40					97.75		1057.75	
19	98.45	80.30	1058.45	1040.30	98.10	79.70	1058.10	1039.70	97.75	78.20	1057.75	1038.20
20	98.40	80.20	1058.40	1040.20	98.05	79.55	1058.05	1039.55	97.70		1057.70	
21					98.00		1058.00			78.20		1038.20
22	98.60	80.35	1058.60	1040.35					*97.70	78.15	1057.70	1038.15
23	98.65	80.35	1058.65	1040.35	98.10	79.30	1058.10	1039.30				
24	98.65	80.33	1058.65	1040.33	98.10	79.20	1058.10	1039.20	*97.70	78.00	1057.70	1038.00
25	98.60	80.50	1058.60	1040.50								
26	98.40	80.20	1058.40	1040.20		79.10		1039.10	*97.70	77.95	1057.70	1037.95
27		80.20		1040.20	98.10	79.10	1058.10	1039.10	*97.70	77.85	1057.70	1037.85
28						79.15		1039.15	*97.70	77.85	1057.70	1037.85
29	98.00	80.00	1058.00	1040.00	98.05	79.10	1058.05	1039.10	*97.66	77.85	1057.66	1037.85
30	98.20	80.00	1058.20	1040.00								
31	98.48	80.10	1058.48	1040.10					*97.60	77.85	1057.60	1037.85

* This record is taken from Kennedy's small chart. (Engrs.)

1. Av. headwater level for July/94..100.40 (C)
   Av Tailwater level for July/94.. 83.47

   Av. head for July..... 16.93 ft.

2. Highest water 1894—100.55 July 17—(C) Note refers to lake level. (Engrs.)
3. July 22 Highest water 1894—83.60 (C) Note refers to tail water level. (Engrs.)

4. Av. head water level for Aug./94..100.00 (C)
   Av. Tailwater level for Aug./94 ... 82.90

   Av. head..... 17.10 ft.

TABLE 6—Continued
WATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO
RECORDS OF JAMES C. KENNEDY

1895	JANUARY					FEBRUARY					MARCH				
	Footnote	Local Datum		Sea-level Datum		Footnote	Local Datum		Sea-level Datum		Footnote	Local Datum		Sea-level Datum	
		Lake	Tail Water	Lake	Tail Water		Lake	Tail Water	Lake	Tail Water		Lake	Tail Water	Lake	Tail Water
1							97.50	77.50	1057.30	1037.50		97.03	76.70	1057.03	1036.70
2			*77.75		1037.75			77.52		1037.52		97.02	76.70	1057.02	1036.70
3			*77.80		1037.80										
4			*77.80		1037.80		97.25	77.35	1057.25	1037.35		97.00	76.65	1057.00	1036.65
5		*97.60	*77.80	1057.60	1037.80			77.35		1037.35		97.00	76.65	1057.00	1036.65
6							97.20	77.35	1057.20	1037.35		97.00	76.60	1057.00	1036.60
7		*97.58	*77.80	1057.58	1037.80			77.35		1037.35		97.00	76.60	1057.00	1036.60
8			*77.85		1037.85		97.20		1057.20		2	97.00	76.60	1057.00	1036.60
9		*97.50		1057.50			97.20	77.35	1057.20	1037.35	3	97.02	76.65	1057.02	1036.65
10		*97.48		1057.18											
11			*77.93		1037.93		97.15	77.22	1057.15	1037.22		96.95	76.55	1056.95	1036.55
12		97.45	77.93	1057.45	1037.93		97.12	77.20	1057.12	1037.20		96.94	76.55	1056.94	1036.55
13							97.12	77.23	1057.12	1037.23		96.96	76.60	1056.96	1036.60
14		97.45	77.80	1057.45	1037.80		97.15	77.26	1057.15	1037.20		96.94	76.58	1056.94	1036.58
15			77.83		1037.83		97.15	77.15	1057.15	1037.15		96.94	76.55	1056.94	1036.55
16		97.45	77.80	1057.43	1037.80		97.13	77.15	1057.13	1037.15	4	96.92	76.58	1056.92	1036.58
17			77.80		1037.80										
18		97.40	77.75	1057.40	1037.75		97.15	77.05	1057.15	1037.05		96.89	76.48	1056.89	1036.48
19			77.75		1037.75		97.13	77.05	1057.13	1037.05		96.88	76.45	1056.88	1036.45
20							97.12	77.00	1057.12	1037.00		96.84	76.42	1056.84	1036.42
21		97.40	77.70	1057.40	1037.70		97.10	76.95	1057.10	1036.95			76.40		1036.40
22			77.70		1037.70		97.08	76.95	1057.08	1036.95		96.81		1056.81	
23		97.40	77.50	1057.40	1037.70		97.09	76.95	1057.09	1036.95		96.80	76.30	1056.80	1036.30
24		97.40	77.70	1057.40	1037.70										
25			77.65		1037.65		97.08	76.85	1057.08	1036.85			76.30		1036.30
26		97.38	77.65	1057.38	1037.65	1	97.07	76.80	1057.07	1036.80		96.78	76.30	1056.78	1036.30
27							97.08	76.80	1057.08	1036.80		96.78	76.30	1056.78	1036.30
28		97.35	77.65	1057.35	1037.65		97.02	76.75	1057.02	1036.75			76.27		1036.27
29			77.58		1037.58							96.72	76.25	1056.72	1036.25
30			77.58		1037.58						5	96.70	76.25	1056.70	1036.25
31		97.30	77.55	1057.30	1037.55										

1895	APRIL					MAY					JUNE				
	Footnote	Local Datum		Sea-level Datum		Footnote	Local Datum		Sea-level Datum		Footnote	Local Datum		Sea-level Datum	
		Lake	Tail Water	Lake	Tail Water		Lake	Tail Water	Lake	Tail Water		Lake	Tail Water	Lake	Tail Water
1		96.70	76.50	1056.70	1036.50		97.00		1057.00			97.85	78.45	1057.85	1038.45
2		96.70	76.50	1056.70	1036.50		97.05	77.20	1057.05	1037.20					
3			76.48		1036.48							97.45	78.20	1057.45	1038.20
4		96.72	76.50	1056.72	1036.50		97.20	77.50	1057.20	1037.50		97.30	78.20	1057.30	1038.20
5			76.50		1036.50							97.55	78.30	1057.55	1038.30
6		96.74	76.50	1056.74	1036.50		97.25	77.70	1057.25	1037.70		97.75	78.50	1057.75	1038.50
7		96.75		1056.75			97.25	77.75	1057.25	1037.75		97.85	78.85	1057.85	1038.85
8		96.76	76.66	1056.76	1036.66		97.25	77.80	1057.25	1037.80		97.60	78.75	1057.60	1038.75
9		96.73	76.62	1056.73	1036.62	7	97.23	77.87	1057.23	1037.87					
10		96.75	76.65	1056.75	1036.65		97.04	77.70	1057.04	1037.70		98.05	79.10	1058.05	1039.10
11		96.75	76.65	1056.75	1036.65							98.05	79.30	1058.05	1039.30
12		96.76	76.70	1056.76	1036.70							98.25	79.50	1058.25	1039.50
13		96.76	76.70	1056.76	1036.70		97.27	77.75	1057.27	1037.75		98.20	79.50	1058.20	1039.50
14							97.45	77.95	1057.45	1037.95		98.05	79.50	1058.05	1039.50
15		96.75	76.70	1056.75	1036.70		97.35	78.00	1057.35	1038.00		98.35	79.70	1058.35	1039.70
16			76.78		1036.78		97.35	78.00	1057.35	1038.00					
17	6	96.75	76.78	1056.75	1036.78		97.25	78.00	1057.25	1038.00		98.45	79.90	1058.45	1039.90
18		96.77	76.73	1056.77	1036.73		97.20	77.95	1057.20	1037.95		98.60	80.25	1058.60	1040.25
19		96.75	76.70	1056.75	1036.70							98.45	80.25	1058.45	1040.25
20			76.70		1036.70		97.30	77.90	1057.30	1037.90		98.50	80.30	1058.50	1040.30
21							97.40	77.95	1057.40	1037.95		98.50	80.30	1058.50	1040.30
22		96.81	76.85	1056.81	1036.85		97.45	77.95	1057.45	1037.95		98.55	80.35	1058.55	1040.35
23		96.86	76.86	1056.86	1036.86		97.45	78.05	1057.45	1038.05					
24			76.90		1036.90		97.35	78.05	1057.35	1038.05		98.75	80.60	1058.75	1040.60
25		96.83	76.85	1056.83	1036.85			77.85		1037.85		98.60	80.45	1058.60	1040.45
26			76.85		1036.85							98.55	80.40	1058.55	1040.40
27		96.85	76.85	1056.85	1036.85		97.60	78.00	1057.60	1038.00		98.50	80.45	1058.50	1040.45
28			76.97		1036.97		97.35	78.10	1057.35	1038.10		98.75	80.50	1058.75	1040.50
39							97.45	78.10	1057.45	1038.10		98.80	80.65	1058.80	1040.65
20		96.93	77.02	1056.93	1037.02		97.40	78.10	1057.40	1038.10					
31							97.45	78.10	1057.45	1038.10					

* This record is taken from Kennedy's small chart. (Engrs.)

1. Nor and Sou dumps met above water surface (C) Note is very indistinct. (Engrs.) 2. Nor and Sou gangs met with coarse stone filling and tracks at pier level (104.35). (C) 3. Nor and Sou Side Gangs both began filling smaller broken stone on face of dam for blinding material. (C) 4. Last evening and this A. M. first stops used placed as follows:—4 in sixth and 4 in seventh dam sluices (to lessen flow at fishway). (W.) 5. 76.25. as per old gauge below tail end of north flume piers. Levels taken this day show this gauge to be incorrect, making the readings 0.25 ft., lower elevation than the correct reading. The error has probably come about gradually and through action of frost on the stones and timbers at the gauge. (W.) Tailwater Gauge discovered on March 30th 1895, to be shifted, showing water 0.25 ft. lower than actual levels. Cause probably frost and dating back to 15th March beginning at 0 and gradually increasing. (C) 6. First Ferry trip of season between Rat Portage and Keewatin. (C) 7. High winds Westerly and NW. (C) This note apparently refers to May 9–10, 1895. (Engrs.)

TABLE 6—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO

RECORDS OF JAMES C. KENNEDY

1895	JULY					AUGUST					*SEPTEMBER				
	Footnote	Local Datum		Sea-level Datum		Footnote	Local Datum		Sea-level Datum		Footnote	Local Datum		Sea-level Datum	
		Lake	Tail Water	Lake	Tail Water		Lake	Tail Water	Lake	Tail Water		Lake	Tail Water	Lake	Tail Water
1		98.90	80.75	1058.90	1040.75			81.50		1041.50					
2		98.95	80.85	1058.95	1040.85		99.25	81.60	1059.25	1041.60		99.00	81.30	1059.00	1041.30
3		99.00	81.00	1059.00	1041.00			81.60		1041.60		99.00	81.30	1059.00	1041.30
4		99.00	81.00	1059.00	1041.00							99.00	81.30	1059.00	1041.30
5		99.00	81.00	1059.00	1041.00			81.60		1041.60		99.00	81.30	1059.00	1041.30
6		99.00	81.10	1059.00	1041.10										
7								81.60		1041.60					
8		98.45	80.70	1058.45	1040.70			81.60		1041.60					
9		98.95	81.00	1058.95	1041.00			81.60		1041.60		98.95		1058.95	
10		99.00	81.10	1059.00	1041.10	1	99.50	81.60	1059.50	1041.60					
11		99.00	81.20	1059.00	1041.20										
12		99.00	81.20	1059.00	1041.20										
13		99.10	81.30	1059.10	1041.30		99.30	81.60	1059.30	1041.60					
14								81.60		1041.60					
15		99.10	81.30	1059.10	1041.30			81.60		1041.60					
16		99.20	81.40	1059.20	1041.40			81.60		1041.60					
17		99.10	81.30	1059.10	1041.30			81.60		1041.60			81.10		1041.10
18		99.15	81.40	1059.15	1041.40										
19		99.20	81.40	1059.20	1041.40		99.20	81.50	1059.20	1041.50		98.80	81.05	1058.80	1041.05
20		99.20	81.40	1059.20	1041.40		99.15	81.45	1059.15	1041.45					
21						2	99.20	81.40	1059.20	1041.40					
22		99.20	81.50	1059.20	1041.50			81.50		1041.50	6	98.65		1058.65	
23		99.20	81.50	1059.20	1041.50	3	99.15	81.40	1059.15	1041.40			80.80		1040.80
24		99.25	81.60	1059.25	1041.60		99.10	81.40	1059.10	1041.40					
25		99.30	81.70	1059.30	1041.70										
26		99.30	81.80	1059.30	1041.80		99.10	81.40	1059.10	1041.40					
27			81.80		1041.80	4	99.00	81.40	1059.00	1041.40					
28						5	99.20	81.30	1059.20	1041.30					
29			81.80		1041.80		99.10	81.30	1059.10	1041.30					
30		99.25	81.60	1059.25	1041.60		99.10	81.40	1059.10	1041.40					
31			81.50		1041.50		99.00	81.30	1059.00	1041.30					

1895	OCTOBER				
1					
2					
3					
4					
5					
6					
7			80.40		1040.40
8			80.35		40.35
9					
10			80.50		40.50
11		98.40		1058.40	
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					

1. High water of 1895. 99.50. Aug. 10 (C)

2. Gang began at noon lowering first row of stop logs on southerly side of flume sluices. (W.) 1 Flume log and 2 dam logs placed all across river (C)

3. 1 log in so. flume sluice & 2 in so. dam sluices 2 logs in 2 dam sluices on Nor. side. (W.) 1 log in all across flume sluices and 2 logs in all across dam sluices. (W.) On Aug. 23, 1895 there were two sets of readings of the gauges. The lake and tail water levels were the same on both readings. The second note presumably refers to conditions of dam after completion of the day's work. (Engrs.)

4. Gallipeau gang began lowering second course of stop logs at northerly side. (W.)

5. 3 ft. flume S. logs and 3½ ft. dam S logs placed in Sluices (C) 2 courses flume and 4 courses of dam logs. (W.)

6. 98.65 ⊙ as per Brown's record Sept. 22/95 (C)

TABLE 6—Continued
WATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO
RECORDS OF JAMES C. KENNEDY

1898	July					August						September					October				
	Foot-note	Local Datum		Sea-level Datum		Foot-note	Local Datum			Sea-level Datum		Foot-note	Local Datum		Sea-level Datum		Foot-note	Local Datum		Sea-level Datum	
		Lake	Tail Water	Lake	Tail Water		Above Dam	Lake	Tail Water	Above Dam	Lake		Lake	Tail Water	Lake	Tail Water		Above Dam	Lake	Tail Water	Lake	Tail Water
1																					
2																					
3								99.08			1059.08										
4									81.25												
5								99.25			1059.25										
6									81.40												
7																					
8																					
9																					
10								99.25	81.50		1059.25		1041.50								
11						1															
12								99.20	81.60		1059.20		1041.60								
13								99.20			1059.20										
14																					
15								99.30	81.65		1059.30		1041.65								
16																					
17								99.30	81.70		1059.30		1041.70								
18						2			81.70				1041.70								
19						3		99.35	81.75		1059.35		1041.75								
20									81.70				1041.70								
21																					
22																					
23								99.20	81.70		1059.20		1041.70								
24																					
25		98.93	81.15	1058.93	1041.15																
26									81.70				1041.70								
27		98.95		1058.95		4		99.50			1059.50										
28																					
29									82.00				1042.00								
30									82.00				1042.00								
31								99.35	81.90		1059.35		1041.90								
1																					
2																					
3																					
4									82.45				1042.45								
5			82.05		1042.05																
6		99.50		1059.50				99.75			1059.75										
7		99.40		1059.40				99.65			1059.65										
8																					
9																					
10						5															
11									82.40				1042.40								
12																					
13																					
14						6		99.65	82.00		1059.65		1042.00								
15									81.90				1041.90								
16								99.70	81.55		1059.70		1041.55								
17																					
18		99.45		1059.45		7		99.35	81.00		1059.35		1041.00								
19						8	98.25	99.65	80.60	1058.25	1059.65		1040.60								
20						9	98.57	99.70	80.35	1058.57	1059.70		1040.35								
21						10	98.80	99.75	80.45	1058.80	1059.75		1040.45								
22						11	99.00	99.80	80.05	1059.00	1059.80		1040.05								
23								99.65	80.25		1059.65		1040.25								
24						12		99.70	80.20		1059.70		1040.20								
25								99.75	80.20		1059.75		1040.20								
26									80.20				1040.20								
27			82.30		1042.30	13		100.00	80.20		1060.00		1040.20								
28		99.80	82.30	1059.80	1042.30			99.95	80.17		1059.95		1040.17								
29								99.72	80.20		1059.72		1040.20								
30		99.70		1059.70				99.85	80.00		1059.85		1040.00								
31								100.10	80.05		1060.10		1040.05								

1. Aug. 11 91.80. At upstream end of piers of sluices. (W.) 2. Aug. 18. 92.00. At upstream end of sluice piers. (W.) 3. ⊙ 101.90. H. W. of 1897 (no date stated) as indicated by a mark shown by Mr. Margach on his boat ho. at R. P. to J. C. Kennedy 19/8/98. (C) 4. so. wind. (W) 5. 1898, Placing of Stop logs began (C) 6. J. C. K. placed gauges on S. E. cor of fishway and at tail end of fishway. The noise and cascade under C. P. R. bridge 113 was greatly lessened by the raising of water at dam by 7 A. M. and before night the white water at that rapid was gone. (W.)

Head at Dam (Above Dam—Engrs.)	Lake	River
7.	99.35 (10 a. m.).	81.00 (a. m.)
8. 98.25.	99.65 (a. m.).	80.60 (a. m.)
1898, Finished placing of stop logs (to about 100-ft. level). (C)		
9. 98.57.	99.70 (a. m.).	80.35
97.80 11 a. m.		
98.70 3 p. m. all sluices closed.		
10. 98.10.		
98.80 (all stop logs in)	99.75	(80.45) 9 a.m.
97.10 1 & 2 flume sluices open		( ) 3 p. m.

Head at Dam (Above Dam—Engrs.)	Lake	River
11. 99.00 8 a. m.	99.80 7 a. m.	80.05
	99.85 (9 a. m.) slight so. breeze)	
12.	99.70	(80.20)
		(80.15)..(W)
13. southerly winds. (W)		

TABLE 6—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO

RECORDS OF JAMES C. KENNEDY

1898	NOVEMBER								DECEMBER							
		Local Datum				Sea-level Datum				Local Datum				Sea-level Datum		
	Footnote	Above Dam	Lake	Tail Water	Footnote	Above Dam	Lake	Tail Water	Footnote	Above Dam	Lake	Tail Water	Footnote	Above Dam	Lake	Tail Water
1										99.82	100.24	77.70		1059.82	1060.24	1037.70
2										99.83		77.70		1059.83		1037.70
3			100.05	80.15			1060.05	1040.15		99.86	100.26	77.70		1059.86	1060.26	1037.70
4			100.07	80.10			1060.07	1040.10	17	99.88	100.30	77.60		1059.88	1060.30	1037.60
5	1		99.85	80.10			1059.85	1040.10								
6	2			80.05				1040.05								
7	3		99.85	80.05			1059.85	1040.05								
8	4		99.75	80.00			1059.75	1040.00		99.92	100.32	77.65		1059.92	1060.32	1037.65
9	5		100.00	80.30			1060.00	1040.30			100.40				1060.40	
10	6		100.10	81.30			1060.10	1041.30								
11			100.05	81.60			1060.05	1041.60								
12			99.85	81.90			1059.85	1041.90								
13	7		99.65	82.00			1059.65	1042.00								
14			99.85	82.10			1059.85	1042.10								
15	8		99.85	82.30			1059.85	1042.30								
16			99.80	82.10			1059.80	1042.10								
17	9	98.50	100.00	81.50		1058.50	1060.00	1041.50								
18	10	98.50	100.00	81.35		1058.50	1060.00	1041.35								
19	11	99.60	99.90	79.90		1059.60	1059.90	1039.90								
20	12	99.70	100.05	79.15		1059.70	1060.05	1039.15								
21	13	99.30	99.53	78.85		1059.30	1059.53	1038.85								
22																
23	14	99.70	100.10	78.30		1059.70	1060.10	1038.30								
24		99.70	100.10	78.20		1059.70	1060.10	1038.20								
25		99.70	100.10	78.10		1059.70	1060.10	1038.10								
26		99.70	100.10	78.00		1059.70	1060.10	1038.00								
27		99.75	100.12	77.80		1059.75	1060.12	1037.80								
28	15	99.75	100.12	77.77		1059.75	1060.12	1037.77								
29	16	99.75	100.17	77.75		1059.75	1060.17	1037.75								
30		99.80	100.22	77.75		1059.80	1060.22	1037.75								
31																

1. n. w. winds (W) 2. Sunday (W) 3. E. wind (W) 4. Relifting of Stop logs began 3 p. m. 1898 5. W. breeze (W) 6. Mr. McQuarrie visited works in afternoon and watched stop log operations a couple of hours. J. C. K. volunteered to impart any information he could regarding the operations for Mr. McQuarrie's guidance in future charge. Mr. McQ said he had instructions from Mr. Margach to visit dam and obtain needed knowledge of operations. (W) 7. Sunday (W) 8. Replacing of Stop logs began 1898 (C)

Head at Dam (Above Dam—Engrs.)	Lake	River
9. 98.50 8 p. m.	100.00 8 p. m.	81.50 8 p.m.
96.50 a. m.	so. breeze	81.95 a. m.
10. 98.50	100.00 Calm	81.35 a. m.
99.60	100.00 stop logs all in.	80.55 3.30 p. m. (W)

Gang completed the placing of stop logs fully up and to 100.00 by 3.30 P. M. and then assisted at various other work. Advised Mr. McQuarrie of the completion of stop log work and requested Mr. McQuarrie to notify Mr. Margach of our readiness to hand works over to Government. (W) Completed placing of Stop logs (to 100.00 level) (C)

11. 99.60	99.90	79.90 a. m.
99.65		79.60 p. m. (W)

In forenoon Mr. McQuarrie visited dam and reported having telephoned to Mr. Margach's and learned of his illness and inability to come and take over control of the dam as promised yesterday, but that in event of J. C. K. wishing to leave, Mr. McQ was authorized to take over same for Mr. Margach. In afternoon Mr. McQuarrie returned and in company with J. C. K. measured distances from top of piers to top of stop logs in each sluice, counted up number of surplus stop logs on decks, checked over the tools and articles belonging to winches and for general work in handling stop logs etc. and signed a receipt for whole outfit the document being drawn up by J. C. K. Thus began Mr. McQuarrie's control and care of the works about 4 P. M. (W) 12. (Sunday) (W) 13. High N. W. Winds (C) 14. Lake frozen over 1898 (C) Lake frozen over, ferry not running between Rat Portage and Keewatin. (W) 15. J. C. K. spent afternoon making out inventory of stock etc., and most of afternoon checking water gauge-levels at Lake. Mr. McQuarrie visited office and had J. C. K. fill in first figures of water gaugings since Nov. 19th, 1898, on new blank forms supplied from Toronto. Mr. McQuarrie also spiked plank at fish way headwater gauge to gain close access to the gauge. (W) 16. J. C. Kennedy spent afternoon in taking levels to check water gauges at Lake and for adjusting instruments. (W) 17. Sunday (W)

TABLE 7

WATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	NOVEMBER 1898							DECEMBER					
	Footnote	Local Datum			Sea-level Datum			Footnote	Local Datum			Sea-level Datum		
		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1									99.85	100.20	77.78	1059.85	1060.20	1037.78
2								d	99.85	100.22	77.78	59.85	60.22	37.78
3									99.86	100.26	77.78	59.86	60.26	37.78
4									99.86	100.25	77.78	59.86	60.25	37.78
5									99.86	100.25	77.78	59.86	60.25	37.78
6									99.90	100.30	77.78	59.90	60.30	37.78
7									99.90	100.30	77.78	59.90	60.30	37.78
8									99.90	100.32	77.78	59.90	60.32	37.78
9									99.90	100.35	77.65	59.90	60.35	37.65
10									99.95	100.35	77.65	59.95	60.35	37.65
11									99.95	100.35	77.65	59.95	60.35	37.65
12									99.95	100.35	77.70	59.95	60.35	37.70
13								1	99.99	100.40	77.70	59.99	60.40	37.70
14									99.82	100.32	a 78.00	59.82	60.32	38.00
15									99.50	100.30	78.65	59.50	60.30	38.65
16									99.30	100.32	a 79.00	59.30	60.32	39.00
17									99.32	100.32	79.20	59.32	60.32	39.20
18									99.32	100.32	79.20	59.32	60.32	39.20
19		99.05	99.90	79.60	1059.65	1059.90	1039.60		99.30	100.32	79.20	59.30	60.32	39.20
20		99.70	100.05	79.15	59.70	60.05	39.15		99.30	100.35	79.20	59.30	60.35	39.20
21		99.30	99.53	78.85	59.30	59.53	38.85		99.32	100.35	79.30	59.32	60.35	39.30
22		99.40	99.60	78.60	59.40	59.60	38.60		99.32	100.35	79.30	59.32	60.35	39.30
23		99.70	100.10	78.30	59.70	60.10	38.30	2	99.30	100.33	79.30	59.30	60.33	39.30
24		99.70	100.10	78.20	59.70	60.10	38.20		99.25	100.36	79.35	59.25	60.36	39.35
25		99.70	100.10	78.10	59.70	60.10	38.10		99.32	100.40	79.40	59.32	60.40	39.40
26		99.70	100.10	a 78.00	59.70	60.10	38.00		99.32	100.40	79.40	59.32	60.40	39.40
27		99.75	100.12	c 78.80	59.75	60.12			99.30	100.32	79.40	59.30	60.32	39.40
28		99.75	100.12	77.77	59.75	60.12	37.77		99.30	100.32	79.40	59.30	60.32	39.40
29		99.75	100.12	77.77	59.75	60.12	37.77		99.32	100.30	79.45	59.32	60.30	39.45
30		99.80	100.20	77.78	59.80	60.20	37.78		99.35	100.30	79.45	59.35	60.30	39.45
31									99.30	100.30	79.40	59.30	60.30	39.40

1. Took out 52 logs from 13th to 15th inst. (R. B.)
2. The taking out of those logs has made very little difference on the lake so far. (S.)

ABBREVIATIONS

(R. B.)—Indicates that the note appears in the gauge reader's Record Book.
(S.)—Indicates that the note appears on the Sheets sent periodically to the office of the Department of Public Works, Ontario.
(M.)—Indicates that the note appears in the records of the Canadian Meteorological Service for their Kenora station.
(Engrs.)—Indicates that the note or comment has been added by the Consulting Engineers.

INTRODUCTORY COMMENTS

The records of the Department of Public Works, Ontario, have been followed literally in compiling this Table, except as indicated by the following letters placed adjacent to the records to which they respectively refer.

a—When the gauge read an even number of feet the gauge readers frequently omitted filling in the decimal column in the original Record Books. Instead of adding "00" they sometimes added dashes (—) or ditto marks (""). Whenever it appeared certain that these marks were intended for "00", two ciphers have been added here in place of the dashes or ditto marks appearing in the Record Book, and the change indicated by the letter "a" placed adjacent to the gauge reading .

b—In the printed headings of the Record Books the decimal column is headed "tenths", but in recording the gauge heights it appears that this column was usually treated as if headed "hundredths". In one place the gauge reader (A. McQuarrie) has labeled two columns "$\frac{1}{10}$". In several places in the Record Books, and more particularly in the early records of McQuarrie, "5" appears alone in the decimal column. In practically every such instance this is evidently intended for 5/100, and in the record as here published, the decimal column has been completed to read .05. Each gauge record which has been thus adjusted (by the Consulting Engineers) is indicated by a small letter "b" placed adjacent to the gauge reading.

c—The record for this date is considered erroneous, unreliable, or admitting of various interpretations. This comment applies more particularly to the records of Napoleon Lemay which are discussed more fully, in the text of this Report, under the caption "Records of the Department of Public Works, Ontario."

d—The note accompanying the gauge record of this date was too long to insert as a footnote, and appears in the list of notes, pages 82 to 84 under the same date.

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	Footnote	JANUARY 1899 Local Datum Above Dam	Local Datum Lake	Local Datum Tail Water	Sea-level Datum Above Dam	Sea-level Datum Lake	Sea-level Datum Tail Water	Footnote	FEBRUARY Local Datum Above Dam	Local Datum Lake	Local Datum Tail Water	Sea-level Datum Above Dam	Sea-level Datum Lake	Sea-level Datum Tail Water
1	...	99.30	100.30	79.40	1059.30	1060.30	1039.40	...	99.25	100.32	79.40	1059.25	1060.32	1039.40
2	...	99.30	100.35	79.40	59.30	60.35	39.40	...	99.25	100.32	79.40	59.25	60.32	39.40
3	...	99.30	100.35	79.40	59.30	60.35	39.40	...	99.25	100.32	79.40	59.25	60.32	39.40
4	...	99.30	100.35	79.40	59.30	60.35	39.40	...	99.25	100.32	79.40	59.25	60.32	39.40
5	...	99.30	100.35	79.40	59.30	60.35	39.40	...	99.25	100.30	79.40	59.25	60.30	39.40
6	...	99.30	100.32	79.40	59.30	60.32	39.40	...	99.22	100.30	79.40	59.22	60.30	39.40
7	...	99.30	100.30	79.40	59.30	60.30	39.40	...	99.20	100.30	79.40	59.20	60.30	39.40
8	...	99.30	100.32	79.50	59.30	60.32	39.50	...	99.15	100.30	79.40	59.15	60.30	39.40
9	...	99.30	100.35	79.50	59.30	60.35	39.50	...	99.15	100.25	79.35	59.15	60.25	39.35
10	...	99.30	100.35	79.50	59.30	60.35	39.50	...	99.12	100.20	79.35	59.12	60.20	39.35
11	...	99.30	100.35	79.50	59.30	60.35	39.50	2	99.12	100.15	79.35	59.12	60.15	39.35
12	...	99.30	100.35	79.50	59.30	60.35	39.50	...	99.12	100.15	79.35	59.12	60.15	39.35
13	...	99.30	100.35	79.50	59.30	60.35	39.50	...	99.12	100.15	79.35	59.12	60.15	39.35
14	...	99.30	100.35	79.50	59.30	60.35	39.50	...	99.10	100.15	79.35	59.10	60.15	39.35
15	...	99.30	100.35	79.50	59.30	60.35	39.50	...	99.10	100.12	79.35	59.10	60.12	39.35
16	...	99.30	100.32	79.50	59.30	60.32	39.50	...	99.10	100.12	79.35	59.10	60.12	39.35
17	1	99.30	100.30	79.50	59.30	60.30	39.50	...	99.10	100.12	79.35	59.10	60.12	39.35
18	...	99.30	100.30	79.50	59.30	60.30	39.50	...	99.10	100.12	79.30	59.10	60.12	39.30
19	...	99.30	100.30	79.50	59.30	60.30	39.50	...	99.10	100.12	79.30	59.10	60 12	39.30
20	...	99.30	100.30	79.50	59.30	60.30	39.50	...	99.10	100.12	79.30	59.10	60.12	39.30
21	...	99.30	100.30	79.50	59.30	60.30	39.50	...	99.05	100.10	79.30	59.05	60.10	39.30
22	...	99.30	100.30	79.50	59.30	60.30	39.50	...	99.05	100.10	79.30	59.05	60.10	39.30
23	...	99.25	100.30	79.40	59.25	60.30	39.40	...	99.05	100.10	79.30	59.05	60.10	39.30
24	...	99.25	100.30	79.40	59.25	60.30	39.40	...	99.00	100.10	79.30	59.00	60.10	39.30
25	...	99.20	100.30	-------	59.20	60.30	-------	...	99.00	100.10	79.30	59.00	60.10	39.30
26	...	99.20	100.30	79.40	59.20	60.30	39.40	...	99.00	100.05	79.30	59.00	60.05	39.30
27	...	99.20	100.30	79.40	59.20	60.30	39.40	...	99.00	100.05	79.30	59.00	60.05	39.30
28	...	99.20	100.25	79.40	59.20	60.25	39.40	...	99.00	100.05	79.30	59.00	60.05	39.30
29	...	99.20	100.25	79.40	59.20	60.25	39.40	...	-------	-------	-------	-------	-------	-------
30	...	99.20	100.25	79.50	59.20	60.25	39.50	...	-------	-------	-------	-------	-------	-------
31	...	99.20	100.22	79.50	59.20	60.22	39.50	...	-------	-------	-------	-------	-------	-------

Date	Footnote	MARCH 1899 Local Datum Above Dam	Local Datum Lake	Local Datum Tail Water	Sea-level Datum Above Dam	Sea-level Datum Lake	Sea-level Datum Tail Water	Footnote	APRIL Local Datum Above Dam	Local Datum Lake	Local Datum Tail Water	Sea-level Datum Above Dam	Sea-level Datum Lake	Sea-level Datum Tail Water
1	...	a 99.00	a 100.00	79.30	1059.00	1060.00	1039.30	...	98.80	99.75	78.80	1058.80	1059.75	1038.80
2	...	a 99.00	a 100.00	79.25	59.00	60.00	39.25	...	98.75	99.75	78.75	58.75	59.75	38.75
3	...	a 99.00	a 100.00	79.20	59.00	60.00	39.20	...	98.75	99.70	78.70	58.75	59.70	38.70
4	...	98.95	99.95	79.15	58.95	59.95	39.15	...	98.75	99.70	78.70	58.75	59.70	38.70
5	...	98.95	99.95	79.15	58.95	59.95	39.15	...	98.75	99.70	78.70	58.75	59.70	38.70
6	...	98.95	99.95	79.10	58.95	59.95	39.10	...	98.75	99.70	78.70	58.75	59.70	38.70
7	...	98.90	99.95	79.10	58.90	59.95	39.10	...	98.75	99.65	78.70	58.75	59.65	38.70
8	...	98.90	99.95	79.05	58.90	59.95	39.05	...	98.70	99.65	78.65	58.70	59.65	38.65
9	...	98.90	99.90	79.05	58.90	59.90	39.05	...	98.70	99.60	78.60	58.70	59.60	38.60
10	...	98.85	99.90	a 79.00	58.85	59.90	39.00	...	98.70	99.60	78.60	58.70	59.60	38.60
11	...	98.80	99.85	a 79.00	58.80	59.85	39.00	4	98.70	99.60	78.70	58.70	59.60	38.70
12	3	98.80	99.85	78.95	58.80	59.85	38.95	...	98.70	99.60	78.70	58.70	59.60	38.70
13	...	98.80	99.85	-------	58.80	59.85	-------	...	98.70	99.60	78.70	58.70	59.60	38.70
14	...	98.80	99.85	78.95	58.80	59.85	38.95	...	98.70	99.60	78.70	58.70	59.60	38.70
15	...	98.80	99.85	78.95	58.80	59.85	38.95	...	98.70	99.60	78.65	58.70	59.60	38.65
16	...	98.80	99.85	78.95	58.80	59.85	38.95	...	98.75	99.60	78.65	58.75	59.60	38.65
17	...	98.80	99.85	78.95	58.80	59.85	38.95	...	98.75	99.60	78.60	58.75	59.60	38.60
18	...	98.80	99.82	78.95	58.80	59.82	38.95	5	97.40	99.60	79.40	57.40	59.60	39.40
19	...	98.80	99.82	78.95	58.80	59.82	38.95	...	95.50	99.50	a 80.00	55.50	59.50	40.00
20	...	98.80	99.80	78.95	58.80	59.80	38.95	...	95.40	99.50	80.70	55.40	59.50	40.70
21	...	98.80	99.80	78.95	58.80	59.80	38.95	...	93.50	99.50	a 81.00	53.50	59.50	41.00
22	...	98.80	99.80	78.95	58.80	59.80	38.95	...	a 92.00	99.50	81.50	52.00	59.50	41.50
23	...	98.80	99.80	78.95	58.80	59.80	38.95	...	93.50	99.60	81.50	53.50	59.60	41.50
24	...	98.80	99.80	78.95	58.80	59.80	38.95	...	93.50	99.60	81.80	53.50	59.60	41.80
25	...	98.80	99.80	78.95	58.80	59.80	38.95	...	92.40	99.65	a 82.00	52.40	59.65	42.00
26	...	98.80	99.80	78.95	58.80	59.80	38.95	...	92.40	99.65	82.10	52.40	59.65	42.10
27	...	98.80	99.80	78.95	58.80	59.80	38.95	...	92.40	99.72	82.15	52.40	59.72	42.15
28	...	98.80	99.80	78.95	58.80	59.80	38.95	...	92.30	99.78	82.20	52.30	59.78	42.20
29	...	98.80	99.80	78.95	58.80	59.80	38.95	...	92.30	99.80	82.30	52.30	59.80	42.30
30	...	98.80	99.75	78.80	58.80	59.75	38.80	...	92.30	99.85	82.40	52.30	59.85	42.40
31	...	98.80	99.75	78.80	58.80	59.75	38.80	...	-------	-------	-------	-------	-------	-------

1. No record in record book, gauge heights from sheets. (Engrs.) 2. Water still falling. (S.) 3. The weather is still very cold and as you will observe the water is slowly going down. (S.) 4. Weather fine, snow and ice melting fast. The lake as a rule does not commence to rise until May or June, but there is more snow this year than there has been for a number of years and consequently will be more water. May come down earlier. (S.) 5. From 18th to 21st, took out 104 logs. (R. B.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	Footnote	MAY 1899 Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water	Footnote	JUNE 1899 Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water
1	...	92.25	99.85	82.50	1052.25	1059.85	1042.50	...	94.50	100.80	84.80	1054.50	1060.80	1044.80
2	...	92.20	99.90	82.75	52.20	59.90	42.75	...	a 94.00	100.80	a 85.00	54.00	60.80	45.00
3	...	92.20	99.90	a 83.00	52.20	59.90	43.00	...	93.75	100.80	85.20	53.75	60.80	45.20
4	1	92.30	a 100.00	83.20	52.30	60.00	43.20	...	93.50	100.90	85.30	53.50	60.90	45.30
5	...	95.40	100.10	83.20	55.40	60.10	43.20	...	93.10	100.95	85.50	53.10	60.95	45.50
6	2	97.80	100.10	83.25	57.80	60.10	43.25	...	92.80	100.90	85.50	52.80	60.90	45.50
7	...	a 98.00	100.15	83.25	58.00	60.15	43.25	...	92.60	100.90	85.60	52.60	60.90	45.60
8	...	a 98.00	100.25	82.60	58.00	60.25	42.60	3	92.60	100.90	85.50	52.60	60.90	45.50
9	...	98.20	100.40	82.10	58.20	60.40	42.10	...	92.60	a 101.00	85.50	52.60	61.00	45.50
10	...	99.40	100.50	81.00	59.40	60.50	41.00	...	92.50	101.10	85.00	52.50	61.10	45.00
11	...	98.50	100.50	81.50	58.50	60.50	41.50	4	92.50	101.10	85.00	52.50	61.10	45.00
12	...	97.80	100.50	81.80	57.80	60.50	41.80	...	92.40	101.10	a 85.00	52.40	61.10	45.00
13	...	97.20	100 40	82.50	57.20	60.40	42.50	...	92.40	a 101.00	a 85.00	52.40	61.00	45.00
14	...	a 96.00	100.50	82.80	56.00	60.50	42.80	...	92.40	101.10	a 85.00	52.40	61.10	45.00
15	...	95.70	100.45	a 83.00	55.70	60.45	43.00	...	92.50	101.40	85.40	52.50	61.40	45.40
16	...	93.80	100.55	83.50	53.80	60.55	43.50	...	92.50	101.50	85.50	52.50	61.50	45.50
17	d	93.75	100.55	83.50	53.75	60.55	43.50	...	92.60	101.50	85.60	52.60	61.50	45.60
18	d	93.70	100.55	83.50	53.70	60.55	43.50	...	92.70	101.50	85.80	52.70	61.50	45.80
19	...	93.75	100.60	83.60	53.75	60.60	43.60	5	92.70	101.50	85.80	52.70	61.50	45.80
20	...	93.80	100.60	83.70	53.80	60.60	43.70	d	92.70	101.30	85.80	52.70	61.30	45.80
21	...	93.90	100.65	84.20	53.90	60.65	44.20	...	92.75	101.60	85.80	52.75	61.60	45.80
22	...	94.00	100.65	84.20	54.00	60.65	44.20	...	92.75	101.60	85.85	52.75	61.60	45.85
23	...	94.10	100.70	84.30	54.10	60.70	44.30	...	92.75	101.60	85.85	52.75	61.60	45.85
24	d	94.10	100.70	84.30	54.10	60.70	44.30	...	92.75	101.60	85.85	52.75	61.60	45.85
25	...	94.10	100.65	.....	54.10	60.65	.....	...	92.75	101.60	85.85	52.75	61.60	45.85
26	...	94.10	100.65	84.30	54.10	60.65	44.30	d	92.75	101.60	85.85	52.75	61.60	45.85
27	...	94.10	100.60	84.30	54.10	60.60	44.30	...	92.80	101.65	85.90	52.80	61.65	45.90
28	...	94.40	100.65	84.30	54.40	60.65	44.30	...	92.85	101.70	85.90	52.85	61.70	45.90
29	...	94.40	100.70	84.30	54.40	60.70	44.30	...	92.90	101.85	86.30	52.90	61.85	46.30
30	...	94.50	100.75	84.40	54.50	60.75	44.40	...	a 93.00	101.90	a 86.00	53.00	61.90	46.00
31	...	94.50	100.75	84.50	54.50	60.75	44.50	...	.....	.....	.....	.....	.....	.....

Date	Footnote	JULY 1899 Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water	Footnote	AUGUST 1899 Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water
1	...	a 93.00	101.90	a 86.00	1053.00	1061.90	1046.00	...	93.20	102.00	86.60	1053.20	1062.00	1046.60
2	...	a 93.00	101.90	a 86.00	53.00	61.90	46.00	...	93.20	102.05	86.50	53.20	62.05	46.50
3	...	a 93.00	a 102.00	a 86.00	53.00	62.00	46.00	...	93.20	102.10	86.50	53.20	62.10	46.50
4	...	a 93.00	101.90	a 86.00	53.00	61.90	46.00	...	93.10	a 102.00	86.50	53.10	62.00	46.50
5	...	a 93.00	101.90	86.30	53.00	61.90	46.30	...	a 93.00	a 102.00	86.50	53.00	62.00	46.50
6	...	a 93.00	101.90	86.30	53.00	61.90	46.30	...	a 93.00	a 102.00	86.40	53.00	62.00	46.40
7	...	a 93.00	a 102.00	86.30	53.00	62.00	46.30	...	a 93.00	a 102.00	86.50	53.00	62.00	46.50
8	...	a 93.00	102.05	86.50	53.00	62.05	46.50	...	93.05	b 102.05	86.50	53.05	62.05	46.50
9	...	b 93.05	b 102.05	86.50	53.05	62.05	46.50	...	a 93.00	102.10	86.60	53.00	62.10	46.60
10	d	b 93.05	a 102.00	86.60	53.05	62.00	46.60	...	a 93.00	b 102.05	86.50	53.00	62.05	46.50
11	...	93.05	b 102.05	a 87.00	53.05	62.05	47.00	...	a 93.00	a 102.00	86.50	53.00	62.00	46.50
12	...	93.10	102.10	a 87.00	53.10	62.10	47.00	...	a 93.00	101.80	86.40	53.00	61.80	46.40
13	...	93.10	102.10	b 87.05	53.10	62.10	47.05	...	b 93.05	a 102.00	86.40	53.05	62.00	46.40
14	...	93.10	102.10	b 87.05	53.10	62.10	47.05	...	b 93.05	b 102.05	86.40	53 05	62.05	46.40
15	...	93.15	b 102.05	87.10	53.15	62.05	47.10	...	b 93.05	b 102.05	86.50	53.05	62.05	46.50
16	...	93.15	b 102.05	87.10	53.15	62.05	47.10	...	b 93.05	b 102.05	86.50	53.05	62.05	46.50
17	d	93.10	b 102.05	87.10	53 10	62.05	47.10	...	b 93.05	a 102.00	86.50	53.05	62.00	46.50
18	...	93.15	102.05	87.15	53.15	62.05	47.15	...	b 93.05	a 102.00	86.50	53.05	62.00	46.50
19	...	93.15	102.05	87.20	53.15	62.05	47.20	...	a 93.00	a 102.00	86.40	53.00	62.00	46.40
20	...	93.10	102.10	87.30	53.10	62.10	47.30	...	a 93.00	101.80	86.40	53.00	61.80	46.40
21	...	93.10	102.10	87.50	53.10	62.10	47.50	...	a 93.00	101.75	86.35	53.00	61.75	46.35
22	...	93.15	102.10	87.50	53.15	62.10	47.50	...	b 93.05	101.80	86.40	53.05	61.80	46.40
23	...	93.15	102.20	87.50	53.15	62.20	47.50	...	b 93.05	101.80	86.40	53.05	61.80	46.40
24	6	93.15	102.30	87.50	53.15	62.30	47.50	...	a 93.00	101.80	86.40	53.00	61.80	46.40
25	...	93.20	b 102.05	87.60	53.20	62.05	47.60	...	a 93.00	101.80	86.40	53.00	61.80	46.40
26	...	93.10	b 102.05	87.50	53.10	62.05	47.50	...	b 93.05	101.80	86.40	53.05	61.80	46.40
27	d	93.10	102.10	a 87.00	53.10	62.10	47.00	...	a 93.00	101.70	86.40	53.00	61.70	46.40
28	...	93.15	b 102.05	a 87.00	53.15	62.05	47.00	7	a 93.00	101.65	86.50	53.00	61.65	46.50
29	...	93.15	b 102.05	a 87.00	53.15	62.05	47.00	...	a 93.00	101.65	86.50	53.00	61.65	46.50
30	...	93.15	102.00	86.75	53.15	62.00	46.75	...	a 93.00	101.65	86.40	53.00	61.65	46.40
31	...	93.15	102.00	86.75	53.15	62.00	46.75	...	92.80	101.65	86.35	52.80	61.65	46.35

1. Put in 150 logs this week from the 4th to 8th. (R. B.) 2. Shallowest water at Ash Rapids on this date 4 feet 8 inches with slow current from Shoal Lake. (S.) 3. The remaining logs were removed this week. (R. B.) 4. Stop logs are all out. Driftwood will all be cleared to-morrow at noon. Now would be the time to put in the boom. (S.) 5. The water in the lake is still a foot below the high-water mark of 1897. (R. B.) (S.) 6. 24th the water attained the height of 1897, but has gone down again. (S.) 7. The lake has commenced to go down as you will observe, but very slow. (S.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	Footnote	SEPTEMBER 1899 — Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water	Footnote	OCTOBER 1899 — Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water
1	...	92.80	101.60	86.40	1052.80	1061.60	1046.40	...	95.50	100.20	a 84.00	1055.50	1060.20	1044.00
2	...	92.80	101.60	86.35	52.80	61.60	46.35	...	95.75	100.50	83.80	55.75	60.50	43.80
3	...	92.80	101.60	86.30	52.80	61.60	46.30	...	a 96.00	100.80	83.50	56.00	60.80	43.50
4	...	92.80	101.60	86.35	52.80	61.60	46.35	...	98.50	100.80	a 83.00	58.50	60.80	43.00
5	...	92.70	101.60	86.35	52.70	61.60	46.35	...	98.80	100.85	82.50	58.80	60.85	42.50
6	...	92.70	101.60	86.30	52.70	61.60	46.30	...	99.45	100.90	a 82.00	59.45	60.90	42.00
7	...	92.65	101.60	86.30	52.65	61.60	46.30	...	99.50	100.90	81.80	59.50	60.90	41.80
8	...	92.60	101.55	86.30	52.60	61.55	46.30	...	99.50	100.90	81.80	59.50	60.90	41.80
9	...	92.50	101.50	a 86.00	52.50	61.50	46.00	...	99.80	100.95	81.80	59.80	60.95	41.80
10	...	92.50	101.45	a 86.00	52.50	61.45	46.00	...	100.20	100.80	81.40	60.20	60.80	41.40
11	1	92.45	101.45	a 86.00	52.45	61.45	46.00	...	100.20	100.80	a 81.00	60.20	60.80	41.00
12	...	92.40	101.30	85.80	52.40	61.30	45.80	...	100.20	100.85	80.50	60.20	60.85	40.50
13	...	92.40	101.30	85.75	52.40	61.30	45.75	...	100.25	100.85	80.20	60.25	60.85	40.20
14	...	92.35	101.30	85.70	52.35	61.30	45.70	...	100.20	100.90	79.50	60.20	60.90	39.50
15	...	92.30	101.25	85.70	52.30	61.25	45.70	...	100.20	100.95	78.90	60.20	60.95	38.90
16	2	92.30	101.25	85.70	52.30	61.25	45.70	...	100.20	101.05	78.80	60.20	61.05	38.80
17	...	92.30	101.25	85.70	52.30	61.25	45.70	...	100.20	101.10	78.90	60.20	61.10	38.90
18	...	92.30	101.30	85.50	52.30	61.30	45.50	...	100.20	c 101.95	78.90	60.20	.....	38.90
19	...	92.30	101.30	85.50	52.30	61.30	45.50	...	100.20	c 101.95	78.90	60.20	.....	38.90
20	...	92.30	101.25	85.30	52.30	61.25	45.30	...	100.20	a 101.00	78.90	60.20	61.00	38.90
21	3	92.25	a 101.00	85.10	52.25	61.00	45.10	...	100.20	101.20	78.90	60.20	61.20	38.90
22	...	92.20	101.15	85.15	52.20	61.15	45.15	...	100.20	101.20	78.90	60.20	61.20	38.90
23	...	92.15	101.20	85.10	52.15	61.20	45.10	...	100.20	101.20	78.90	60.20	61.20	38.90
24	...	92.25	101.20	84.50	52.25	61.20	44.50	...	100.20	101.20	78.80	60.20	61.20	38.80
25	4	92.50	101.20	84.25	52.50	61.20	44.25	...	100.40	101.20	78.90	60.40	61.20	38.90
26	...	92.50	101.10	84.20	52.50	61.10	44.20	...	100.50	101.30	78.50	60.50	61.30	38.50
27	5	92.75	99.80	84.10	52.75	59.80	44.10	...	100.50	101.30	78.50	60.50	61.30	38.50
28	d	a 93.00	99.30	84.10	53.00	59.30	44.10	...	100.50	101.25	78.50	60.50	61.25	38.50
29	...	a 94.00	b 100.05	a 84.00	54.00	60.05	44.00	...	100.50	101.30	78.50	60.50	61.30	38.50
30	d	95.20	b 100.05	a 84.00	55.20	60.05	44.00	...	100.40	101.30	78.50	60.40	61.30	38.50
31	...	.....	.....	.....	.....	.....	.....	...	100.40	101.30	78.50	60.40	61.30	38.50

Date	Footnote	NOVEMBER 1899 — Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water	Footnote	DECEMBER 1899 — Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water
1	...	100.45	101.30	78.50	1060.45	1061.30	1038.50	...	100.45	101.30	78.60	1060.45	1061.30	1038.60
2	...	100.50	101.30	78.50	60.50	61.30	38.50	...	100.40	101.30	78.60	60.40	61.30	38.60
3	...	100.60	101.30	78.50	60.60	61.30	38.50	...	100.40	101.30	78.55	60.40	61.30	38.55
4	...	100.50	101.30	78.60	60.50	61.30	38.60	...	100.40	101.30	78.50	60.40	61.30	38.50
5	...	100.50	101.35	78.60	60.50	61.35	38.60	7	100.35	101.25	78.50	60.35	61.25	38.50
6	...	100.40	101.30	78.50	60.40	61.30	38.50	d	100.35	101.25	78.50	60.35	61.25	38.50
7	...	100.30	101.30	78.75	60.30	61.30	38.75	...	100.35	101.25	78.50	60.35	61.25	38.50
8	...	100.25	101.25	78.75	60.25	61.25	38.75	...	100.40	101.30	78.50	60.40	61.30	38.50
9	d	100.25	101.30	78.75	60.25	61.30	38.75	...	100.40	101.35	78.50	60.40	61.35	38.50
10	...	100.30	101.20	78.75	60.30	61.20	38.75	8	100.40	101.30	78.50	60.40	61.30	38.50
11	...	100.25	101.30	78.60	60.25	61.30	38.60	...	100.35	101.30	78.50	60.35	61.30	38.50
12	...	100.40	101.25	78.60	60.40	61.25	38.60	9	100.30	101.25	78.90	60.30	61.25	38.90
13	...	100.30	101.30	78.70	60.30	61.30	38.70	...	100.20	101.25	79.20	60.20	61.25	39.20
14	...	100.25	101.30	78.75	60.25	61.30	38.75	...	99.95	100.90	79.30	59.95	60.90	39.30
15	...	100.40	101.40	78.70	60.40	61.40	38.70	...	99.90	100.95	79.60	59.90	60.95	39.60
16	...	100.30	101 25	78.60	60.30	61.25	38.60	...	99.90	100.90	80.00	59.90	60.90	40.00
17	...	100.30	101.25	78.70	60.30	61.25	38.70	...	99.80	100.75	80.10	59.80	60.75	40.10
18	...	100.35	101.25	78.75	60.35	61.25	38.75	...	99.75	100.75	80.10	59.75	60.75	40.10
19	...	100.30	101.25	78.75	60.30	61.25	38.75	...	99.75	100.75	80.10	59.75	60.75	40.10
20	...	100.40	101.25	78.75	60.40	61.25	38.75	...	99.75	100.80	b 80.05	59.75	60.80	40.05
21	...	100.35	101.30	78.80	60.35	61.30	38.80	...	99.75	100.75	b 80.05	59.75	60.75	40.05
22	...	100.40	101.30	78.80	60.40	61.30	38.80	...	99.70	100.75	a 80.00	59.70	60.75	40.00
23	...	100.45	101.35	78.80	60.45	61.35	38.80	...	99.70	100.75	b 80.05	59.70	60.75	40.05
24	...	100.50	101 30	78.75	60.50	61.30	38.75	...	99.70	100.70	b 80.05	59.70	60.70	40.05
25	...	100.50	101.40	78.80	60.50	61.40	38.80	...	99.70	100.70	a 80.00	59.70	60.70	40.00
26	...	100.45	101.35	78.80	60.45	61.35	38.80	...	99.65	100.70	a 80.00	59.65	60.70	40.00
27	6	100.45	101.35	78.75	60.45	61.35	38.75	...	99.65	100.65	a 80.00	59.65	60.65	40.00
28	...	100.45	101.35	78.75	60.45	61.35	38.75	...	99.65	100.65	79.90	59.65	60.65	39.90
29	...	100.45	101.35	78.75	60.45	61.35	38.75	...	99.65	100.65	79.90	59.65	60.65	39.90
30	...	100.45	101.30	78.75	60.45	61.30	38.75	...	99.65	100.65	79.90	59.65	60.65	39.90
31	...	.....	.....	.....	.....	.....	.....	...	99.65	100.65	79.90	59.65	60.65	39.90

1. Strong wind, NW. (M.) 2. Steamboat men report current running out of Shoal Lake at Ash Rapids. (R. B.) (S.) 3. Low water on the 21st was caused by a strong north wind (R. B.) The low water on the 21st was caused by the wind blowing a gale from the north. (S.) 4. Commenced putting in stop logs. R. B.) 5. Gale from north 18 hours through midnight. (M.) 6. Steamboats still running through Ash Rapids; no ice on the lake yet. (R. B.) (S.) 7. Bay partly frozen over (M.) 8. Ice gone from bay (M.) 9. Took out 74 logs on the 12th and 13th insts. Temperature 6° below zero. (R. B.) 13th, bay frozen (M.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	JANUARY 1900							FEBRUARY						
	Local Datum			Sea-level Datum				Local Datum			Sea-level Datum			
	Footnote	Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water	Footnote	Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1	...	99.75	100.70	79.90	1059.75	1060.70	1039.90	3	99.45	100.35	79.35	1059.45	1060.35	1039.35
2	...	99.75	100.70	79.90	59.75	60.70	39.90	...	99.45	100.35	79.35	59.45	60.35	39.35
3	...	99.70	100.70	79.90	59.70	60.70	39.90	...	99.45	100.35	79.35	59.45	60.35	39.35
4	...	99.70	100.70	79.85	59.70	60.70	39.85	...	99.45	100.30	79.30	59.45	60.30	39.30
5	...	99.70	100.65	79.85	59.70	60.65	39.85	...	99.40	100.30	79.30	59.40	60.30	39.30
6	...	99.70	100.65	79.85	59.70	60.65	39.85	...	99.40	100.30	79.30	59.40	60.30	39.30
7	...	99.70	100.65	79.80	59.70	60.65	39.80	...	99.40	100.30	79.25	59.40	60.30	39.25
8	...	99.70	100.65	79.80	59.70	60.65	39.80	...	99.35	100.30	79.25	59.35	60.30	39.25
9	...	99.70	100.65	79.75	59.70	60.65	39.75	...	99.35	100.25	79.25	59.35	60.25	39.25
10	...	99.70	100.65	79.75	59.70	60.65	39.75	...	99.35	100.25	79.25	59.35	60.25	39.25
11	...	99.70	100.70	79.75	59.70	60.70	39.75	...	99.35	100.25	79.20	59.35	60.25	39.20
12	...	99.70	100.65	79.75	59.70	60.65	39.75	...	99.35	100.25	79.20	59.35	60.25	29.20
13	...	99.65	100.65	79.75	59.65	60.65	39.75	...	99.30	100.25	79.20	59.30	60.25	39.20
14	...	99.65	100.60	79.70	59.65	60.60	39.70	...	99.30	100.25	79.20	59.30	60.25	39.20
15	1	99.60	100.60	79.70	59.60	60.60	39.70	...	99.25	100.30	79.20	59.25	60.30	39.20
16	...	99.60	100.60	79.70	59.60	60.60	39.70	...	99.25	100.30	79.20	59.25	60.30	39.20
17	...	99.60	100.55	79.65	59.60	60.55	39.65	...	99.25	100.25	79.10	59.25	60.25	39.10
18	...	99.60	100.55	79.65	59.60	60.55	39.65	...	99.20	100.25	79.10	59.20	60.25	39.10
19	...	99.60	100.50	79.60	59.60	60.50	39.60	...	99.15	100.20	79.10	59.15	60.20	39.10
20	...	99.60	100.50	79.60	59.60	60.50	39.60	...	99.15	100.20	79.10	59.15	60.20	39.10
21	2	99.50	100.55	79.60	59.50	60.55	39.60	...	99.15	100.15	b79.05	59.15	60.15	39.05
22	...	99.50	100.50	79.60	59.50	60.50	39.60	...	99.15	100.15	b79.05	59.15	60.15	39.05
23	...	99.50	100.50	79.60	59.50	60.50	39.60	...	99.10	100.15	b79.05	59.10	60.15	39.05
24	...	99.50	100.45	79.55	59.50	60.45	39.55	4	99.10	100.10	a79.00	59.10	60.10	39.00
25	...	99.50	100.40	79.50	59.50	60.40	39.50	...	99.10	100.10	a79.00	59.10	60.10	39.00
26	...	99.50	100.40	79.45	59.50	60.40	39.45	...	99.05	100.10	a79.00	59.05	60.10	39.00
27	...	99.45	100.35	79.40	59.45	60.35	39.40	...	99.00	100.10	a79.00	59.00	60.10	39.00
28	...	99.45	100.35	79.40	59.45	60.35	39.40	...	99.00	100.05	78.95	59.00	60.05	38.95
29	...	99.45	100.35	79.40	59.45	60.35	39.40	...						
30	...	99.45	100.35	79.40	59.45	60.35	39.40	...						
31	...	99.45	100.35	79.35	59.45	60.35	39.35	...						

Date	MARCH 1900							APRIL						
	Footnote	Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water	Footnote	Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1	...	98.90	a100.00	78.90	1058.90	1060.00	1038.90	6	98.05	99.15	a 78.00	1058.05	1059.15	1038.00
2	...	98.85	99.95	78.85	58.85	59.95	38.85	...	98.05	99.15	a 78.00	58.05	59.15	38.00
3	...	98.85	99.90	78.85	58.85	59.90	38.85	7	98.60	99.15	a 78.00	58.60	59.15	38.00
4	...	98.70	99.85	78.70	58.70	59.85	38.70	d	98.60	99.20	77.90	58.60	59.20	37.90
5	...	98.70	99.80	78.70	58.70	59.80	38.70	...	98.65	99.25	77.85	58.65	59.25	37.85
6	...	98.70	99.80	78.65	58.70	59.80	38.65	...	98.70	99.25	77.40	58.70	59.25	37.40
7	...	98.65	99.75	78.60	58.65	59.75	38.60	...	98.70	99.25	77.40	58.70	59.25	37.40
8	...	98.65	99.70	78.50	58.65	59.70	38.50	...	98.70	99.25	77.40	58.70	59.25	37.40
9	...	98.60	99.70	78.50	58.60	59.70	38.50	...	98.70	99.25	77.40	58.70	59.25	37.40
10	...	98.60	99.65	78.45	58.60	59.65	38.45	...	98.70	99.25	77.40	58.70	59.25	37.40
11	...	98.55	99.60	78.45	58.55	59.60	38.45	...	98.70	99.25	77.40	58.70	59.25	37.40
12	...	98.50	99.60	78.40	58.50	59.60	38.40	...	98.70	99.30	77.40	58.70	59.30	37.40
13	...	98.45	99.60	78.40	58.45	59.60	38.40	...	98.70	99.40	77.35	58.70	59.40	37.35
14	...	98.40	99.55	78.35	58.40	59.55	38.35	d	98.70	99.40	77.35	58.70	59.40	37.35
15	5	98.40	99.50	78.30	58.40	59.50	38.30	...	98.70	99.45	77.35	58.70	59.45	37.35
16	...	98.40	99.50	78.30	58.40	59.50	38.30	...	98.70	99.45	77.30	58.70	59.45	37.30
17	...	98.40	99.50	78.30	58.40	59.50	38.30	...	98.70	99.50	77.30	58.70	59.50	37.30
18	...	98.35	99.50	78.30	58.35	59.50	38.30	...	98.70	99.50	77.30	58.70	59.50	37.30
19	...	98.35	99.45	78.25	58.35	59.45	38.25	...	98.70	99.50	77.30	58.70	59.50	37.30
20	...	98.35	99.40	78.25	58.35	59.40	38.25	8	98.70	99.50	77.30	58.70	59.50	37.30
21	...	98.30	99.35	78.20	58.30	59.35	38.20	...	98.70	99.50	77.30	58.70	59.50	37.30
22	...	98.25	99.30	78.20	58.25	59.30	38.20	...	98.70	99.50	77.30	58.70	59.50	37.30
23	...	98.20	99.25	78.15	58.20	59.25	38.15	...	98.65	99.45	77.30	58.65	59.45	37.30
24	...	98.15	99.20	78.10	58.15	59.20	38.10	...	98.65	99.45	76.95	58.65	59.45	36.95
25	...	98.10	99.20	78.10	58.10	59.20	38.10	...	98.65	99.45	76.90	58.65	59.45	36.90
26	d	98.10	99.15	a 78.00	58.10	59.15	38.00	9	98.65	99.45	76.80	58.65	59.45	36.80
27	...	98.10	99.15	a 78.00	58.10	59.15	38.00	...	98.65	99.45	76.80	58.65	59.45	36.80
28	...	98.10	99.15	a 78.00	58.10	59.15	38.00	...	98.65	99.45	76.80	58.65	59.45	36.80
29	...	98.10	99.10	a 78.00	58.10	59.10	38.00	...	98.65	99.45	76.80	58.65	59.45	36.80
30	...	98.05	99.10	a 78.00	58.05	59.10	38.00	...	98.60	99.50	76.85	58.60	59.50	36.85
31	...	98.05	99.05	77.95	58.05	59.05	37.95	...						

1. There has only been about 3 inches of snow to date. This winter so far mildest on record. (Jan. 15–20) (R. B.) (S.) 2. Very little snow. Weather cold and windy. (Jan. 21–31) (R. B.) 3. Weather cold and stormy, 25° below this week. (Feb. 1–14.) (R. B.) 4. About 3 inches of snow fell this week. (R. B.) 5. Weather very cold and windy (S.) 6. Put in balance of the logs (Apr. 1 9.) (R. B.) (S.) 7. Put in all the logs left out last fall, 72 in all, 24 15-inch logs and 48 12-inch logs. (Apr. 3–4.) (R. B.) 8. Bay all clear of ice. (M.) 9. Weather very dry; snow all gone. (S.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	May 1900							June						
	Footnote	Local Datum			Sea-level Datum			Footnote	Local Datum			Sea-level Datum		
		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1	1	98.60	99.50	76.90	1058.60	1059.50	1036.90	...	98.60	99.45	76.80	1058.60	1059.45	1036.80
2	...	98.60	99.45	a 77.00	58.60	59.45	37.00	...	98.60	99.45	76.80	58.60	59.45	36.80
3	...	98.65	99.50	a 77.00	58.65	59.50	37.00	...	98.60	99.45	76.85	58.60	59.45	36.85
4	...	98.60	99.45	76.90	58.60	59.45	36.90	...	98.55	99.40	a 77.00	58.55	59.40	37.00
5	...	98.60	99.45	76.85	58.60	59.45	36.85	...	98.60	99.45	77.10	58.60	59.45	37.10
6	2	98.60	99.45	76.85	58.60	59.45	36.85	...	98.65	99.45	77.10	58.65	59.45	37.10
7	...	98.60	99.45	76.85	58.60	59.45	36.85	...	98.60	99.50	77.10	58.60	59.50	37.10
8	...	98.60	99.45	76.85	58.60	59.45	36.85	3 d	98.65	99.50	77.10	58.65	59.50	37.10
9	...	98.60	99.45	76.85	58.60	59.45	36.85	4	98.50	99.50	77.10	58.50	59.50	37.10
10	...	98.60	99.45	76.85	58.60	59.45	36.85	...	98.50	99.50	77.10	58.50	59.50	37.10
11	...	98.60	99.45	76.80	58.60	59.45	36.80	...	98.50	99.50	77.10	58.50	59.50	37.10
12	...	98.60	99.45	76.80	58.60	59.45	36.80	...	98.45	99.50	77.10	58.45	59.50	37.10
13	...	98.60	99.45	76.80	58.60	59.45	36.80	...	98.45	99.50	77.10	58.45	59.50	37.10
14	...	98.60	99.45	76.80	58.60	59.45	36.80	...	98.40	99.50	77.10	58.40	59.50	37.10
15	...	98.60	99.45	76.80	58.60	59.45	36.80	...	98.40	99.50	77.10	58.40	59.50	37.10
16	...	98.60	99.45	76.80	58.60	59.45	36.80	...	98.40	99.45	77.10	58.40	59.45	37.10
17	...	98.60	99.45	76.80	58.60	59.45	36.80	...	98.35	99.45	77.10	58.35	59.45	37.10
18	...	98.60	99.45	76.80	58.60	59.45	36.80	...	98.35	99.40	77.10	58.35	59.40	37.10
19	...	98.60	99.45	76.80	58.60	59.45	36.80	...	98.35	99.40	77.10	58.35	59.40	37.10
20	...	98.60	99.45	76.80	58.60	59.45	36.80	...	98.35	99.40	77.10	58.35	59.40	37.10
21	...	98.60	99.45	76.80	58.60	59.45	36.80	...	98.35	99.50	77.10	58.35	59.50	37.10
22	...	98.60	99.45	76.80	58.60	59.45	36.80	...	98.35	99.50	77.10	58.35	59.50	37.10
23	...	98.60	99.45	76.80	58.60	59.45	36.80	...	98.35	99.45	77.10	58.35	59.45	37.10
24	...	98.60	99.45	76.80	58.60	59.45	36.80	...	98.30	99.40	77.10	58.30	59.40	37.10
25	...	98.60	99.45	76.80	58.60	59.45	36.80	...	98.30	99.35	77.10	58.30	59.35	37.10
26	...	98.60	99.45	76.80	58.60	59.45	36.80	5	98.30	99.35	77.10	58.30	59.35	37.10
27	...	98.60	99.45	76.80	58.60	59.45	36.80	...	98.30	99.30	77.10	58.30	59.30	37.10
28	...	98.60	99.45	76.80	58.60	59.45	36.80	...	98.25	99.30	77.10	58.25	59.30	37.10
29	...	98.60	99.45	76.80	58.60	59.45	36.80	...	98.20	99.30	77.10	58.20	59.30	37.10
30	...	98.60	99.45	76.80	58.60	59.45	36.80	...	98.20	99.35	77.10	58.20	59.35	37.10
31	...	98.60	99.45	76.80	58.60	59.45	36.80	...						

Date	July 1900							August						
	Footnote	Local Datum			Sea-level Datum			Footnote	Local Datum			Sea-level Datum		
		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1	d	98.20	99.30	77.10	1058.20	1059.30	1037.10	...	b 98.05	a 99.00	b 77.05	1058.05	1059.00	1037.05
2	...	98.20	99.20	77.10	58.20	59.20	37.10	...	b 98.05	b 99.05	a 77.00	58.05	59.05	37.00
3	...	98.20	99.25	77.10	58.20	59.25	37.10	...	b 98.05	a 99.00	a 77.00	58.05	59.00	37.00
4	...	98.20	99.20	77.10	58.20	59.20	37.10	...	98.00	a 99.00	a 77.00	58.00	59.00	37.00
5	...	98.20	99.25	77.10	58.20	59.25	37.10	...	98.05	a 99.00	a 77.00	58.05	59.00	37.00
6	...	98.20	99.25	b 77.05	58.20	59.25	37.05	...	98.00	a 99.00	a 77.00	58.00	59.00	37.00
7	...	98.20	99.25	b 77.05	58.20	59.25	37.05	...	a 98.00	98.95	a 77.00	58.00	58.95	37.00
8	...	98.20	99.25	b 77.05	58.20	59.25	37.05	...	a 98.00	98.95	76.90	58.00	58.95	36.90
9	...	98.20	99.25	b 77.05	58.20	59.25	37.05	...	97.95	98.90	76.90	57.95	58.90	36.90
10	...	98.20	99.25	b 77.05	58.20	59.25	37.05	...	97.95	98.90	76.85	57.95	58.90	36.85
11	...	98.20	99.25	b 77.05	58.20	59.25	37.05	...	97.90	98.85	76.85	57.90	58.85	36.85
12	...	98.20	99.25	b 77.05	58.20	59.25	37.05	...	97.90	98.85	76.85	57.90	58.85	36.85
13	6	98.20	99.25	b 77.05	58.20	59.25	37.05	...	97.90	98.85	76.85	57.90	58.85	36.85
14	...	98.20	99.25	b 77.05	58.20	59.25	37.05	...	97.90	98.80	76.85	57.90	58.80	36.85
15	...	98.25	99.25	b 77.05	58.25	59.25	37.05	...	97.85	98.80	76.85	57.85	58.80	36.85
16	...	98.25	99.25	b 77.05	58.25	59.25	37.05	9	97.85	98.80	76.85	57.85	58.80	36.85
17	...	98.25	99.30	77.10	58.25	59.30	37.10	...	97.85	98.80	76.85	57.85	58.80	36.85
18	...	98.25	99.30	77.10	58.25	59.30	37.10	...	97.80	98.80	76.85	57.80	58.80	36.85
19	...	98.25	99.30	77.10	58.25	59.30	37.10	...	97.80	98.85	76.85	57.80	58.85	36.85
20	7	98.25	99.30	77.10	58.25	59.30	37.10	...	97.85	98.85	76.80	57.85	58.85	36.80
21	...	98.25	99.30	77.10	58.25	59.30	37.10	...	97.85	98.80	76.85	57.85	58.80	36.85
22	...	98.25	99.30	77.10	58.25	59.30	37.10	...	97.85	98.85	76.85	57.85	58.85	36.85
23	...	98.25	99.30	77.10	58.25	59.30	37.10	10	97.80	98.85	76.85	57.80	58.85	36.85
24	...	98.25	99.30	77.10	58.25	59.30	37.10	...	97.85	98.90	76.90	57.85	58.90	36.90
25	...	98.20	99.30	77.10	58.20	59.30	37.10	...	97.85	98.90	76.90	57.85	58.90	36.90
26	...	98.20	99.25	77.10	58.20	59.25	37.10	...	97.85	a 99.00	76.90	57.85	59.00	36.90
27	8	98.15	99.25	77.10	58.15	59.25	37.10	...	97.90	a 99.00	76.85	57.90	59.00	36.85
28	...	98.15	99.20	77.10	58.15	59.20	37.10	...	97.95	a 99.00	a 77.00	57.95	59.00	37.00
29	...	98.10	99.10	77.10	58.10	59.10	37.10	...	a 98.00	a 99.00	a 77.00	58.00	59.00	37.00
30	...	98.10	99.10	b 77.05	58.10	59.10	37.05	...	a 98.00	a 99.00	a 77.00	58.00	59.00	37.00
31	...	98.10	99.10	b 77.05	58.10	59.10	37.05	...	a 98.00	a 99.00	a 77.00	58.00	59.00	37.00

1. Strong wind all day. (M.) 2. Weather very dry. (R. B.) Weather very hot and dry. (S.) (May 6–18.) 3. A considerable amount of rain fell the last 4 days. (R. B.) 4. Weather dry and hot. (June 9–20.) (S.) 5. Slight showers 26th and 27th. (R. B.) (S.) 6. Light showers of rain this week. (S.) 7. Dry and hot again. (S.) 8. Very hot and dry. (July 27–29.) (R. B.) (S.) 9. Weather dry and hot. (S.) 10. Heavy rainfall this last week. (S.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	Footnote	SEPTEMBER 1900 Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water	Footnote	OCTOBER Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water
1		a 98.00	99.10	a 77.00	1058.00	1059.10	1037.00		99.90	101.30	79.80	1059.90	1061.30	1039.80
2		98.10	99.20	a 77.00	58.10	59.20	37.00		99.90	101.30	79.80	59.90	61.30	39.80
3		98.15	99.20	77.20	58.15	59.20	37.20		99.85	101.40	79.85	59.85	61.40	39.85
4		98.25	99.25	77.30	58.25	59.25	37.30		99.85	101.40	79.90	59.85	61.40	39.90
5		98.40	99.40	77.40	58.40	59.40	37.40		99.85	101.45	79.90	59.85	61.45	39.90
6		98.50	99.40	77.50	58.50	59.40	37.50		a 98.00	101.50	79.85	58.00	61.50	39.85
7		98.60	99.55	77.70	58.60	59.55	37.70		a 98.00	101.45	79.80	58.00	61.45	39.80
8		98.75	99.70	77.90	58.75	59.70	37.90		a 98.00	101.40	80.00	58.00	61.40	40.00
9		98.90	99.80	a 78.00	58.90	59.80	38.00		a 98.00	101.55	80.05	58.00	61.55	40.05
10		98.95	99.90	78.10	58.95	59.90	38.10		98.10	101.50	a 80.00	58.10	61.50	40.00
11		a 99.00	a 100.00	78.20	59.00	60.00	38.20		a 98.00	101.60	80.05	58.00	61.60	40.05
12		99.10	100.15	78.30	59.10	60.15	38.30		97.50	101.65	80.10	57.50	61.65	40.10
13		99.20	100.20	78.40	59.20	60.20	38.40		97.60	101.60	81.15	57.60	61.60	41.15
14		99.30	100.25	78.50	59.30	60.25	38.50		95.80	101.60	82.50	55.80	61.60	42.50
15		99.40	100.30	78.60	59.40	60.30	38.60	2	94.50	101.65	83.75	54.50	61.65	43.75
16		99.40	100.30	78.60	59.40	60.30	38.60		94.10	102.10	84.50	54.10	62.10	44.50
17		99.40	100.30	78.50	59.40	60.30	38.50	d	a 93.00	101.80	84.60	53.00	61.80	44.60
18		99.40	100.45	78.65	59.40	60.45	38.65		a 93.00	101.80	84.60	53.00	61.80	44.60
19		99.40	100.50	78.70	59.40	60.50	38.70		93.10	101.80	84.50	53.10	61.80	44.50
20		99.40	100.60	78.70	59.40	60.60	38.70		93.10	101.85	84.50	53.10	61.85	44.50
21		99.45	100.65	78.75	59.45	60.65	38.75		93.10	101.80	84.60	53.10	61.80	44.60
22		99.45	100.70	78.80	59.45	60.70	38.80		93.05	101.90	84.75	53.05	61.90	44.75
23		99.50	100.80	78.90	59.50	60.80	38.90		93.00	101.80	84.70	53.00	61.80	44.70
24	1	99.60	100.80	78.90	59.60	60.80	38.90		93.10	101.85	84.60	53.10	61.85	44.60
25		100.05	101.20	a 79.00	60.05	61.20	39.00		93.15	101.85	84.50	53.15	61.85	44.50
26	d	a 100.00	101.10	79.50	60.00	61.10	39.50		93.10	101.90	84.50	53.10	61.90	44.50
27		a 100.00	101.10	79.50	60.00	61.10	39.50		93.10	101.85	84.60	53.10	61.85	44.60
28		99.95	101.20	79.50	59.95	61.20	39.50		93.10	101.85	84.75	53.10	61.85	44.75
29		99.90	101.20	79.60	59.90	61.20	39.60		93.15	101.90	84.60	53.15	61.90	44.60
30		99.90	101.20	79.80	59.90	61.20	39.80		93.15	101.90	84.50	53.15	61.90	44.50
31									93.15	101.90	84.40	53.15	61.90	44.40

Date	Footnote	NOVEMBER 1900 Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water	Footnote	DECEMBER Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water
1		93.15	101.85	84.60	1053.15	1061.85	1044.60	5	92.75	101.75	84.15	1052.75	1061.75	1044.15
2		93.10	102.10	84.50	53.10	62.10	44.50		92.75	101.75	84.15	52.75	61.75	44.15
3		93.15	102.10	84.60	53.15	62.10	44.60		92.75	101.75	84.15	52.75	61.75	44.15
4		93.10	102.15	84.60	53.10	62.15	44.60		92.75	101.75	84.15	52.75	61.75	44.15
5		93.05	102.10	84.70	53.05	62.10	44.70		92.70	101.75	84.15	52.70	61.75	44.15
6		93.10	102.15	84.75	53.10	62.15	44.75		92.70	101.75	84.15	52.70	61.75	44.15
7		93.10	102.15	84.75	53.10	62.15	44.75		92.70	101.75	84.10	52.70	61.75	44.10
8		93.10	102.20	84.70	53.10	62.20	44.70		92.70	101.75	84.10	52.70	61.75	44.10
9		93.15	102.25	84.70	53.15	62.25	44.70	6	92.70	101.75	84.10	52.70	61.75	44.10
10		93.15	102.25	84.75	53.15	62.25	44.75		92.70	101.75	84.10	52.70	61.75	44.10
11		93.15	102.25	84.75	53.15	62.25	44.75		92.70	101.75	84.10	52.70	61.75	44.10
12		93.15	102.20	84.75	53.15	62.20	44.75		92.65	101.75	84.10	52.65	61.75	44.10
13		93.15	102.10	84.75	53.15	62.10	44.75		92.65	101.70	84.10	52.65	61.70	44.10
14		93.15	102.10	84.70	53.15	62.10	44.70		92.65	101.70	84.10	52.65	61.70	44.10
15		93.15	102.10	84.70	53.15	62.10	44.70		92.65	101.70	84.10	52.65	61.70	44.10
16		93.10	102.05	84.65	53.10	62.05	44.65	7	92.65	101.70	84.10	52.65	61.70	44.10
17		93.10	a 102.00	84.60	53.10	62.00	44.60		92.65	101.70	84.05	52.65	61.70	44.05
18		93.10	a 102.00	84.60	53.10	62.00	44.60		92.65	101.70	84.05	52.65	61.70	44.05
19		93.05	a 102.00	84.50	53.05	62.00	44.50		92.65	101.70	84.05	52.65	61.70	44.05
20		a 93.00	101.90	84.40	53.00	61.90	44.40		92.65	101.70	84.05	52.65	61.70	44.05
21	3	a 93.00	101.95	84.40	53.00	61.95	44.40		92.65	101.70	84.05	52.65	61.70	44.05
22		93.05	101.90	84.45	53.05	61.90	44.45		92.65	101.70	84.05	52.65	61.70	44.05
23	4	a 93.00	101.85	84.40	53.00	61.85	44.40		92.60	101.70	84.05	52.60	61.70	44.05
24		92.95	101.80	84.35	52.95	61.80	44.35		92.60	101.65	84.05	52.60	61.65	44.05
25		92.90	101.75	84.30	52.90	61.75	44.30		92.60	101.65	84.10	52.60	61.65	44.10
26		92.85	101.75	84.30	52.85	61.75	44.30		92.60	101.65	84.10	52.60	61.65	44.10
27		92.85	101.75	84.25	52.85	61.75	44.25		92.60	101.65	84.10	52.60	61.65	44.10
28		92.80	101.75	84.20	52.80	61.75	44.20		92.60	101.65	84.15	52.60	61.65	44.15
29		92.75	101.75	84.15	52.75	61.75	44.15		92.60	101.65	84.15	52.60	61.65	44.15
30		92.75	101.75	84.15	52.75	61.75	44.15		92.60	101.65	84.15	52.60	61.65	44.15
31									92.55	101.65	84.15	52.55	61.65	44.15

1. Heavy wind all night. (M.) 2. All logs out except three in bottom. (Oct. 14-15.) (R. B.) 3. Bay partly frozen over. (M.) 4. Bay frozen over. (M.) 5. Bay gradually opening up. (M.) 6. Bay again frozen. (M.) 7. Lower before taking out logs. (R. B.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	Footnote	JANUARY 1901 Local Datum Above Dam	Lake	Tail Water	Sea-level Datum Above Dam	Lake	Tail Water	Footnote	FEBRUARY Local Datum Above Dam	Lake	Tail Water	Sea-level Datum Above Dam	Lake	Tail Water
1	...	92.55	101.60	84.15	1052.55	1061.60	1044.15	...	92.50	101.30	84.30	1052.50	1061.30	1044.30
2	...	92.55	101.60	84.10	52.55	61.60	44.10	...	92.50	101.30	84.30	52.50	61.30	44.30
3	...	92.50	101.60	84.10	52.50	61.60	44.10	...	92.50	101.30	84.30	52.50	61.30	44.30
4	...	92.50	101.55	84.10	52.50	61.55	44.10	...	92.50	101.30	84.30	52.50	61.30	44.30
5	...	92.50	101.55	84.10	52.50	61.55	44.10	...	92.50	101.25	84.25	52.50	61.25	44.25
6	...	92.50	101.55	84.05	52.50	61.55	44.05	...	92.50	101.25	84.25	52.50	61.25	44.25
7	...	92.50	101.55	84.05	52.50	61.55	44.05	...	92.50	101.25	84.25	52.50	61.25	44.25
8	1	92.50	101.50	84.05	52.50	61.50	44.05	...	92.50	101.25	84.25	52.50	61.25	44.25
9	...	92.50	101.50	84.05	52.50	61.50	44.05	...	92.50	101.25	84.25	52.50	61.25	44.25
10	...	92.50	101.50	84.10	52.50	61.50	44.10	...	92.50	101.25	84.25	52.50	61.25	44.25
11	...	92.50	101.50	84.15	52.50	61.50	44.15	...	92.50	101.20	84.25	52.50	61.20	44.25
12	...	92.50	101.45	84.15	52.50	61.45	44.15	...	92.50	101.20	84.25	52.50	61.20	44.25
13	...	92.50	101.45	84.20	52.50	61.45	44.20	...	92.50	101.20	84.25	52.50	61.20	44.25
14	...	92.50	101.40	84.30	52.50	61.40	44.30	...	92.50	101.15	84.20	52.50	61.15	44.20
15	...	92.50	101.40	84.40	52.50	61.40	44.40	...	92.50	101.15	84.20	52.50	61.15	44.20
16	2	92.50	101.40	84.40	52.50	61.40	44.40	...	92.50	101.15	84.20	52.50	61.15	44.20
17	...	92.50	101.40	84.40	52.50	61.40	44.40	...	92.50	101.10	84.20	52.50	61.10	44.20
18	...	92.50	101.40	84.40	52.50	61.40	44.40	...	92.50	101.10	84.15	52.50	61.10	44.15
19	...	92.50	101.40	84.40	52.50	61.40	44.40	...	92.50	101.10	84.15	52.50	61.10	44.15
20	...	92.50	101.40	84.40	52.50	61.40	44.40	...	92.50	101.10	84.10	52.50	61.10	44.10
21	...	92.50	101.35	84.40	52.50	61.35	44.40	...	92.50	101.05	84.10	52.50	61.05	44.10
22	...	92.50	101.35	84.40	52.50	61.35	44.40	...	92.50	101.05	84.10	52.50	61.05	44.10
23	3	92.50	101.35	84.40	52.50	61.35	44.40	...	92.50	a 101.00	84.10	52.50	61.00	44.10
24	...	92.50	101.40	84.40	52.50	61.40	44.40	...	92.50	a 101.00	84.05	52.50	61.00	44.05
25	...	92.50	101.40	84.40	52.50	61.40	44.40	...	92.50	100.90	a 84.00	52.50	60.90	44.00
26	...	92.50	101.35	84.35	52.50	61.35	44.35	...	92.50	100.90	a 84.00	52.50	60.90	44.00
27	...	92.50	101.35	84.35	52.50	61.35	44.35	...	92.50	100.85	83.90	52.50	60.85	43.90
28	...	92.50	101.30	84.35	52.50	61.30	44.35	...	92.50	100.85	83.90	52.50	60.85	43.90
29	...	92.50	101.30	84.30	52.50	61.30	44.30	...						
30	...	92.50	101.30	84.30	52.50	61.30	44.30	...						
31	...	92.50	101.30	84.30	52.50	61.30	44.30	...						

Date	Footnote	MARCH 1901 Local Datum Above Dam	Lake	Tail Water	Sea-level Datum Above Dam	Lake	Tail Water	Footnote	APRIL Local Datum Above Dam	Lake	Tail Water	Sea-level Datum Above Dam	Lake	Tail Water
1	...	92.50	100.80	83.90	1052.50	1060.80	1043.90	...	93.60	99.80	82.40	1053.60	1059.80	1042.40
2	...	92.50	100.80	83.80	52.50	60.80	43.80	...	95.40	99.85	a 82.00	55.40	59.85	42.00
3	...	92.50	100.75	83.80	52.50	60.75	43.80	...	a 97.00	99.85	82.30	57.00	59.85	42.30
4	...	92.50	100.70	83.75	52.50	60.70	43.75	...	97.75	99.90	81.70	57.75	59.90	41.70
5	...	92.50	100.70	83.75	52.50	60.70	43.75	...	98.40	99.95	80.60	58.40	59.95	40.60
6	...	92.50	100.65	83.75	52.50	60.65	43.75	5	98.80	99.95	a 80.00	58.80	59.95	40.00
7	...	92.50	100.65	83.75	52.50	60.65	43.75	...	99.40	a 100.00	79.40	59.40	60.00	39.40
8	...	92.50	100.60	83.60	52.50	60.60	43.60	...	99.50	100.05	79.30	59.50	60.05	39.30
9	...	92.50	100.60	83.60	52.50	60.60	43.60	...	99.50	100.05	79.30	59.50	60.05	39.30
10	...	92.50	100.50	83.55	52.50	60.50	43.55	...	99.50	100.10	79.30	59.50	60.10	39.30
11	...	92.50	100.45	83.50	52.50	60.45	43.50	...	99.55	100.10	79.25	59.55	60.10	39.25
12	...	92.50	100.40	83.50	52.50	60.40	43.50	...	99.60	100.15	79.25	59.60	60.15	39.25
13	...	92.50	100.40	83.45	52.50	60.40	43.45	...	99.60	100.15	79.20	59.60	60.15	39.20
14	...	92.50	100.30	83.40	52.50	60.30	43.40	...	99.65	100.15	79.20	59.65	60.15	39.20
15	d	92.50	100.30	83.35	52.50	60.30	43.35	...	99.65	100.20	79.10	59.65	60.20	39.10
16	...	92.50	100.30	83.30	52.50	60.30	43.30	...	99.65	100.20	79.05	59.65	60.20	39.05
17	...	92.50	100.30	83.30	52.50	60.30	43.30	...	99.65	100.25	a 79.00	59.65	60.25	39.00
18	...	92.50	100.25	83.30	52.50	60.25	43.30	...	99.70	100.30	a 79.00	59.70	60.30	39.00
19	...	92.50	100.20	83.25	52.50	60.20	43.25	...	99.70	100.40	78.90	59.70	60.40	38.90
20	...	92.50	100.20	83.20	52.50	60.20	43.20	...	99.70	100.45	78.90	59.70	60.45	38.90
21	...	92.50	100.15	83.15	52.50	60.15	43.15	...	99.75	100.50	78.90	59.75	60.50	38.90
22	...	92.50	100.10	83.10	52.50	60.10	43.10	6	99.80	100.55	78.85	59.80	60.55	38.85
23	...	92.50	a 100.00	82.95	52.50	60.00	42.95	...	99.80	100.60	78.80	59.80	60.60	38.80
24	...	92.50	99.95	82.95	52.50	59.95	42.95	...	99.80	100.70	78.80	59.80	60.70	38.80
25	...	92.50	99.90	82.90	52.50	59.90	42.90	...	99.90	100.70	78.80	59.90	60.70	38.80
26	4	92.50	99.85	82.90	52.50	59.85	42.90	...	99.95	100.75	78.75	59.95	60.75	38.75
27	...	92.50	99.85	82.90	52.50	59.85	42.90	...	100.00	100.80	78.80	60.00	60.80	38.80
28	...	92.50	99.80	82.85	52.50	59.80	42.85	...	100.00	100.80	78.85	60.00	60.80	38.85
29	...	92.50	99.80	82.75	52.50	59.80	42.75	...	100.05	100.90	78.80	60.05	60.90	38.80
30	...	92.50	99.80	82.75	52.50	59.80	42.75	...	100.05	100.95	78.75	60.05	60.95	38.75
31	...	92.50	99.75	82.70	52.50	59.75	42.70	...						

1. From lake to dam 9.00 fall. (S.) 2. From lake to dam 8.90 fall. (S.) 3. From lake to dam 8.85 fall. (S.) 4. Weather clear and cold winds, frosty nights. A good deal of sunshine, but the ice has not thawed much yet. (S.) 5. Ferry from Keewatin commenced running. (M.) 6. Ice all clear from bay. (M.)

TABLE 7—Continued

ATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	Footnote	May 1901 Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water	Footnote	June 1901 Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water
1	...	100.10	101.00	78.75	1060.10	1061.00	1038.75	...	97.20	100.80	83.25	1057.20	1060.80	1043.25
2	...	100.15	101.05	78.80	60.15	61.05	38.80	...	97.15	100.75	83.25	57.15	60.75	43.25
3	...	100.20	101.05	78.80	60.20	61.05	38.80	...	97.20	100.80	83.25	57.20	60.80	43.25
4	1	100.25	101.10	78.80	60.25	61.10	38.80	...	97.25	100.80	83.25	57.25	60.80	43.25
5	2	99.10	101.00	80.00	59.10	61.00	40.00	...	97.25	100.85	83.30	57.25	60.85	43.30
6	...	a 99.00	100.95	80.50	59.00	60.95	40.50	...	97.30	100.85	83.30	57.30	60.85	43.30
7	...	a 99.00	100.90	80.90	59.00	60.90	40.90	...	97.30	100.90	83.30	57.30	60.90	43.30
8	...	99.05	100.80	80.95	59.05	60.80	40.95	...	97.40	100.90	83.40	57.40	60.90	43.40
9	...	99.05	100.80	81.50	59.05	60.80	41.50	...	97.40	100.90	83.40	57.40	60.90	43.40
10	3	a 99.00	100.90	81.75	59.00	60.90	41.75	...	97.40	100.95	83.45	57.40	60.95	43.45
11	...	99.10	100.95	81.90	59.10	60.95	41.90	...	97.40	a 101.00	83.40	57.40	61.00	43.40
12	...	99.10	a 101.00	a 82.00	59.10	61.00	42.00	4	97.45	101.05	83.45	57.45	61.05	43.15
13	...	99.10	b 101.05	a 82.00	59.10	61.05	42.00	...	97.45	101.05	83.40	57.45	61.05	43.40
14	...	99.10	101.10	a 82.00	59.10	61.10	42.00	...	97.45	101.10	83.40	57.45	61.10	43.40
15	...	99.15	101.20	a 82.00	59.15	61.20	42.00	...	97.50	101.10	83.40	57.50	61.10	43.40
16	...	99.20	101.30	a 82.00	59.20	61.30	42.00	...	97.50	101.05	83.40	57.50	61.05	43.40
17	...	99.20	101.25	82.10	59.20	61.25	42.10	...	97.50	101.05	83.45	57.50	61.05	43.45
18	...	98.50	101.10	82.50	58.50	61.10	42.50	...	97.50	101.10	83.45	57.50	61.10	43.45
19	...	98.20	101.05	82.75	58.20	61.05	42.75	...	97.55	101.05	83.45	57.55	61.05	43.45
20	...	a 98.00	a 101.00	83.10	58.00	61.00	43.10	...	97.55	a 101.00	83.50	57.55	61.00	43.50
21	...	97.40	100.80	83.10	57.40	60.80	43.10	...	97.60	101.05	83.50	57.60	61.05	43.50
22	d	97.40	100.80	83.20	57.40	60.80	43.20	...	97.60	101.10	83.50	57.60	61.10	43.50
23	...	97.40	100.80	83.20	57.40	60.80	43.20	...	97.60	101.10	83.50	57.60	61.10	43.50
24	...	97.40	100.80	83.25	57.40	60.80	43.25	...	97.60	101.15	83.55	57.60	61.15	43.55
25	...	97.35	100.80	83.25	57.35	60.80	43.25	...	97.60	101.20	83.60	57.60	61.20	43.60
26	...	97.30	100.75	83.25	57.30	60.75	43.25	...	97.60	101.20	83.60	57.60	61.20	43.60
27	...	97.30	100.75	83.20	57.30	60.75	43.20	...	97.60	101.20	83.60	57.60	61.20	43.60
28	...	97.25	100.75	83.20	57.25	60.75	43.20	5	97.60	101.20	.....	57.60	61.20	.....
29	...	97.25	100.75	83.20	57.25	60.75	43.20	...	97.60	101.20	83.60	57.60	61.20	43.60
30	...	97.20	100.80	83.25	57.20	60.80	43.25	...	97.60	101.20	83.60	57.60	61.20	43.60
31	...	97.20	100.80	83.25	57.20	60.80	43.25	...	.....	.....	.....	.....	.....	.....

Date	Footnote	July 1901 Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water	Footnote	August 1901 Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water
1	...	97.65	101.20	83.65	1057.65	1061.20	1043.65	...	97.65	101.10	83.25	1057.65	1061.10	1043.25
2	...	97.65	101.20	83.65	57.65	61.20	43.65	...	97.60	101.10	83.25	57.60	61.10	43.25
3	...	97.65	101.25	83.65	57.65	61.25	43.65	...	97.55	101.10	83.25	57.55	61.10	43.25
4	...	97.65	101.25	83.60	57.65	61.25	43.60	...	97.50	101.05	83.25	57.50	61.05	43.25
5	...	97.65	101.30	83.60	57.65	61.30	43.60	...	97.40	101.05	83.20	57.40	61.05	43.20
6	...	97.65	101.35	83.65	57.65	61.35	43.65	...	97.35	a 101.00	83.15	57.35	61.00	43.15
7	...	97.65	101.40	83.60	57.65	61.40	43.60	...	97.25	100.95	83.10	57.25	60.95	43.10
8	6	97.65	101.40	83.60	57.65	61.40	43.60	...	97.20	100.90	83.05	57.20	60.90	43.05
9	...	97.65	101.40	83.60	57.65	61.40	43.60	...	97.10	100.85	a 83.00	57.10	60.85	43.00
10	...	97.65	101.40	83.60	57.65	61.40	43.60	d	b 97.05	100.80	a 83.00	57.05	60.80	43.00
11	...	97.65	101.45	83.60	57.65	61.45	43.60	...	97.10	100.80	a 83.00	57.10	60.80	43.00
12	...	97.65	101.45	83.60	57.65	61.45	43.60	...	97.10	100.75	a 83.00	57.10	60.75	43.00
13	...	97.65	101.45	83.60	57.65	61.45	43.60	...	97.05	100.70	a 83.00	57.05	60.70	43.00
14	7	97.70	101.45	83.60	57.70	61.45	43.60	...	97.10	100.70	82.80	57.10	60.70	42.80
15	...	97.70	101.50	83.70	57.70	61.50	43.70	...	97.05	100.70	82.80	57.05	60.70	42.80
16	...	97.70	101.50	83.60	57.70	61.50	43.60	...	97.05	100.70	82.80	57.05	60.70	42.80
17	...	97.65	101.45	83.65	57.65	61.45	43.65	...	97.05	100.70	82.80	57.05	60.70	42.80
18	...	97.65	101.45	83.60	57.65	61.45	43.60	...	97.05	100.75	a 83.00	57.05	60.75	43.00
19	...	97.65	101.45	83.60	57.65	61.45	43.60	...	97.10	100.75	83.05	57.10	60.75	43.05
20	...	97.65	101.45	83.60	57.65	61.45	43.60	...	98.50	100.75	82.75	58.50	60.75	42.75
21	...	97.65	101.45	83.60	57.65	61.45	43.60	...	a 99.00	100.80	81.50	59.00	60.80	41.50
22	...	97.65	101.40	83.55	57.65	61.40	43.55	...	99.30	100.80	a 81.00	59.30	60.80	41.00
23	...	97.65	101.40	83.55	57.65	61.40	43.55	...	99.70	100.85	80.65	59.70	60.85	40.65
24	d	97.65	101.35	83.50	57.65	61.35	43.50	9	99.70	100.85	80.50	59.70	60.85	40.50
25	...	97.65	101.30	83.50	57.65	61.30	43.50	...	99.70	100.85	80.50	59.70	60.85	40.50
26	...	97.65	101.30	83.50	57.65	61.30	43.50	...	99.70	100.80	80.50	59.70	60.80	40.50
27	...	97.65	101.25	83.45	57.65	61.25	43.45	...	99.65	100.80	80.45	59.65	60.80	40.45
28	...	97.65	101.20	83.35	57.65	61.20	43.35	...	99.75	100.85	80.45	59.75	60.85	40.45
29	...	97.65	101.20	83.30	57.65	61.20	43.30	...	99.75	100.80	80.40	59.75	60.80	40.40
30	8	97.65	101.10	83.25	57.65	61.10	43.25	...	99.75	100.80	80.40	59.75	60.80	40.40
31	...	97.65	101.10	83.25	57.65	61.10	43.25	...	99.75	100.85	80.40	59.75	60.85	40.40

1. Saturday the 4th removed 53 logs. (R. B.) (S.) 2. No record in Book for Tail Water gauge. Gauge height taken from Sheet. (Engrs.) 3. Windy, showers in afternoon. (M.) 4. Showers—very windy. (M.) 5. Tail Water reading missing in Record Book. (Engrs.) 6. Heavy rains reported from the Upper Lakes. (S.) 7. Thunder and lightning, hail, heavy storm 3 p. m.; almost cyclone. (M.) 8. Heavy wind. (M.) 9. I finished putting in the logs yesterday. They are all in now except one across out of each flume which I left out until I see how the lake will come up. (S.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	SEPTEMBER 1901							OCTOBER					
	Local Datum			Sea-level Datum				Local Datum			Sea-level Datum		
	Footnote	Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water	Footnote	Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1	...	99.70	100.85	80.40	1059.70	1060.85	1040.40	...	99.50	100.40	79.90	1059.50	1060.40	1039.90
2	...	99.70	100.90	80.35	59.70	60.90	40.35	...	99.50	100.40	79.70	59.50	60.40	39.70
3	...	99.75	a 101.00	80.35	59.75	61.00	40.35	...	99.50	100.40	79.60	59.50	60.40	39.60
4	...	99.75	100.90	80.30	59.75	60.90	40.30	...	99.50	100.40	79.50	59.50	60.40	39.50
5	d	99.75	100.85	80.30	59.75	60.85	40.30	...	99.50	100.40	79.30	59.50	60.40	39.30
6	...	99.70	100.85	80.30	59.70	60.85	40.30	...	99.50	100.40	79.30	59.50	60.40	39.30
7	...	99.70	100.85	80.30	59.70	60.85	40.30	...	99.50	100.40	79.20	59.50	60.40	39.20
8	...	99.70	100.80	80.25	59.70	60.80	40.25	...	99.50	100.40	79.20	59.50	60.40	39.20
9	...	99.70	100.75	80.25	59.70	60.75	40.25	...	99.50	100.40	79.20	59.50	60.40	39.20
10	...	99.70	100.75	80.25	59.70	60.75	40.25	...	99.50	100.40	79.10	59.50	60.40	39.10
11	...	99.70	100.70	80.25	59.70	60.70	40.25	...	99.50	100.35	1 79.00	59.50	60.35	39.00
12	...	99.75	100.70	80.20	59.75	60.70	40.20	...	99.50	100.35	78.90	59.50	60.35	38.90
13	...	99.75	100.75	80.20	59.75	60.75	40.20	...	99.50	100.35	78.50	59.50	60.35	38.50
14	...	99.75	100.70	80.20	59.75	60.70	40.20	1	99.50	100.30	78.40	59.50	60.30	38.40
15	...	99.70	100.65	80.15	59.70	60.65	40.15	...	99.50	100.30	78.30	59.50	60.30	38.30
16	...	99.70	100.60	80.15	59.70	60.60	40.15	...	99.50	100.25	78.30	59.50	60.25	38.30
17	...	99.70	100.60	80.10	59.70	60.60	40.10	d	99.50	100.25	78.30	59.50	60.25	38.30
18	...	99.70	100.60	80.10	59.70	60.60	40.10	...	99.50	100.25	78.30	59.50	60.25	38.30
19	...	99.70	100.60	80.10	59.70	60.60	40.10	...	99.50	100.25	78.30	59.50	60.25	38.30
20	...	99.70	100.60	80.10	59.70	60.60	40.10	...	99.50	100.25	78.30	59.50	60.25	38.30
21	...	99.70	100.55	80.10	59.70	60.55	40.10	...	99.45	100.25	78.30	59.45	60.25	38.30
22	...	99.70	100.55	80.10	59.70	60.55	40.10	...	99.45	100.20	78.25	59.45	60.20	38.25
23	...	99.70	100.50	80.10	59.70	60.50	40.10	...	99.40	100.20	78.25	59.40	60.20	38.25
24	...	99.70	100.50	80.10	59.70	60.50	40.10	...	99.40	100.20	78.25	59.40	60.20	38.25
25	...	99.70	100.50	80.10	59.70	60.50	40.10	...	99.40	100.20	78.25	59.40	60.20	38.25
26	...	99.70	100.45	80.10	59.70	60.45	40.10	...	99.40	100.20	78.20	59.40	60.20	38.20
27	...	99.65	100.40	80.05	59.65	60.40	40.05	...	99.40	100.15	78.20	59.40	60.15	38.20
28	...	99.60	100.40	a 80.00	59.60	60.40	40.00	...	99.40	100.15	78.20	59.40	60.15	38.20
29	...	99.55	100.40	79.90	59.55	60.40	39.90	...	99.40	100.10	78.15	59.40	60.10	38.15
30	...	99.50	100.40	79.90	59.50	60.40	39.90	...	99.40	100.10	78.10	59.40	60.10	38.10
31	...							...	99.40	100.00	78.10	59.40	60.00	38.10

Date	NOVEMBER 1901							DECEMBER					
1	...	99.40	a 100.00	78.10	1059.40	1060.00	1038.10	...	98.90	99.30	77.70	1058.90	1059.30	1037.70
2	...	99.40	a 100.00	78.10	59.40	60.00	38.10	...	98.90	99.30	77.70	58.90	59.30	37.70
3	...	99.40	a 100.00	78.10	59.40	60.00	38.10	...	98.90	99.30	77.70	58.90	59.30	37.70
4	...	99.40	99.90	78.05	59.40	59.90	38.05	...	98.90	99.30	77.70	58.90	59.30	37.70
5	...	99.35	99.85	78.05	59.35	59.85	38.05	...	98.90	99.30	77.70	58.90	59.30	37.70
6	...	99.35	99.80	78.05	59.35	59.80	38.05	...	98.90	99.30	77.70	58.90	59.30	37.70
7	...	99.30	99.75	a 78.00	59.30	59.75	38.00	...	98.90	99.30	77.70	58.90	59.30	37.70
8	...	99.25	99.75	a 78.00	59.25	59.75	38.00	...	98.90	99.30	77.70	58.90	59.30	37.70
9	...	99.25	99.70	a 78.00	59.25	59.70	38.00	...	98.90	99.30	77.70	58.90	59.30	37.70
10	...	99.20	99.65	77.95	59.20	59.65	37.95	...	98.90	99.30	77.70	58.90	59.30	37.70
11	...	99.15	99.60	77.95	59.15	59.60	37.95	...	98.90	99.30	77.70	58.90	59.30	37.70
12	...	99.10	99.55	77.95	59.10	59.55	37.95	...	98.90	99.30	77.70	58.90	59.30	37.70
13	...	99.05	99.50	77.90	59.05	59.50	37.90	...	98.90	99.30	77.70	58.90	59.30	37.70
14	...	a 99.00	99.45	77.90	59.00	59.45	37.90	...	98.90	99.30	77.70	58.90	59.30	37.70
15	...	a 99.00	99.45	77.90	59.00	59.45	37.90	...	98.90	99.30	77.70	58.90	59.30	37.70
16	2	a 99.00	99.45	77.90	59.00	59.45	37.90	...	98.90	99.30	77.30	58.90	59.30	37.30
17	...	a 99.00	99.45	77.90	59.00	59.45	37.90	...	98.90	99.30	77.30	58.90	59.30	37.30
18	3	a 99.00	99.45	77.90	59.00	59.45	37.90	...	98.90	99.30	77.30	58.90	59.30	37.30
19	...	a 99.00	99.40	77.90	59.00	59.40	37.90	...	98.90	99.30	77.30	58.90	59.30	37.30
20	...	a 99.00	99.40	77.90	59.00	59.40	37.90	...	98.90	99.30	77.30	58.90	59.30	37.30
21	...	98.95	99.40	77.80	58.95	59.40	37.80	...	98.90	99.30	77.30	58.90	59.30	37.30
22	...	98.95	99.40	77.80	58.95	59.40	37.80	...	98.90	99.30	77.30	58.90	59.30	37.30
23	...	98.95	99.40	77.80	58.95	59.40	37.80	...	98.90	99.30	77.30	58.90	59.30	37.30
24	...	98.95	99.40	77.80	58.95	59.40	37.80	...	98.90	99.30	77.30	58.90	59.30	37.30
25	...	98.95	99.35	77.80	58.95	59.35	37.80	...	98.90	99.30	77.30	58.90	59.30	37.30
26	...	98.95	99.35	77.80	58.95	59.35	37.80	...	98.90	99.30	77.30	58.90	59.30	37.30
27	...	98.90	99.35	77.70	58.90	59.35	37.70	...	98.90	99.30	77.30	58.90	59.30	37.30
28	...	98.90	99.35	77.70	58.90	59.35	37.70	...	98.90	99.30	77.30	58.90	59.30	37.30
29	...	98.90	99.30	77.70	58.90	59.30	37.70	...	98.90	99.30	77.30	58.90	59.30	37.30
30	...	98.90	99.30	77.70	58.90	59.30	37.70	...	98.90	99.30	77.30	58.90	59.30	37.30
31	...							...	98.90	99.30	77.30	58.90	59.30	37.30

1. Put in last row of stop logs. (R. B.) (S.)
2. Bay partly frozen. (M.)
3. Fine, skating on bay. (M.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	Footnote	JANUARY 1902 Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water	Footnote	FEBRUARY Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water
1		98.90	99.30	77.30	1058.90	1059.30	1037.30		98.90	99.30	77.30	1058.90	1059.30	1037.30
2		98.90	99.30	77.30	58.90	59.30	37.30		98.90	99.30	77.30	58.90	59.30	37.30
3		98.90	99.30	77.30	58.90	59.30	37.30		98.90	99.30	77.30	58.90	59.30	37.30
4		98.90	99.30	77.30	58.90	59.30	37.30		98.90	99.30	77.30	58.90	59.30	37.30
5		98.90	99.30	77.30	58.90	59.30	37.30		98.90	99.30	77.30	58.90	59.30	37.30
6		98.90	99.30	77.30	58.90	59.30	37.30		98.90	99.30	77.30	58.90	59.30	37.30
7		98.90	99.30	77.30	58.90	59.30	37.30		98.85	99.25	77.30	58.85	59.25	37.30
8		98.90	99.30	77.30	58.90	59.30	37.30		98.85	99.25	77.25	58.85	59.25	37.25
9		98.90	99.30	77.30	58.90	59.30	37.30		98.85	99.25	77.25	58.85	59.25	37.25
10		98.90	99.30	77.30	58.90	59.30	37.30		98.80	99.25	77.25	58.80	59.25	37.25
11		98.90	99.30	77.30	58.90	59.30	37.30		98.80	99.20	77.25	58.80	59.20	37.25
12		98.90	99.30	77.30	58.90	59.30	37.30		98.80	99.20	77.20	58.80	59.20	37.20
13		98.90	99.30	77.30	58.90	59.30	37.30		98.75	99.20	77.20	58.75	59.20	37.20
14		98.90	99.30	77.30	58.90	59.30	37.30		98.75	99.15	77.15	58.75	59.15	37.15
15		98.90	99.30	77.30	58.90	59.30	37.30		98.75	99.15	77.15	58.75	59.15	37.15
16		98.90	99.30	77.30	58.90	59.30	37.30		98.75	99.15	77.15	58.75	59.15	37.15
17		98.90	99.30	77.30	58.90	59.30	37.30		98.75	99.15	77.15	58.75	59.15	37.15
18		98.90	99.30	77.30	58.90	59.30	37.30		98.70	99.15	77.15	58.70	59.15	37.15
19		98.90	99.30	77.30	58.90	59.30	37.30		98.70	99.10	77.15	58.70	59.10	37.15
20		98.90	99.30	77.30	58.90	59.30	37.30		98.70	99.10	77.10	58.70	59.10	37.10
21		98.90	99.30	77.30	58.90	59.30	37.30		98.70	99.10	77.10	58.70	59.10	37.10
22		98.90	99.30	77.30	58.90	59.30	37.30		98.70	99.10	77.10	58.70	59.10	37.10
23		98.90	99.30	77.30	58.90	59.30	37.30		98.70	99.10	77.10	58.70	59.10	37.10
24		98.90	99.30	77.30	58.90	59.30	37.30		98.70	99.10	77.10	58.70	59.10	37.10
25		98.90	99.30	77.30	58.90	59.30	37.30		98.70	99.05	77.10	58.70	59.05	37.10
26		98.90	99.30	77.30	58.90	59.30	37.30		98.65	99.05	77.10	58.65	59.05	37.10
27		98.90	99.30	77.30	58.90	59.30	37.30		98.65	99.05	77.10	58.65	59.05	37.10
28		98.90	99.30	77.30	58.90	59.30	37.30		98.65	99.05	77.10	58.65	59.05	37.10
29		98.90	99.30	77.30	58.90	59.30	37.30							
30		98.90	99.30	77.30	58.90	59.30	37.30							
31		98.90	99.30	77.30	58.90	59.30	37.30							

Date	Footnote	MARCH 1902 Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water	Footnote	APRIL Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water
1		98.65	99.05	77.10	1058.65	1059.05	1037.10		98.65	99.05	77.05	1058.65	1059.05	1037.05
2		98.65	99.05	77.10	58.65	59.05	37.10		98.65	99.05	77.05	58.65	59.05	37.05
3		98.60	99.05	77.10	58.60	59.05	37.10		98.60	a 99.00	77.05	58.60	59.00	37.05
4		98.60	99.00	77.05	58.60	59.00	37.05		98.55	98.95	77.05	58.55	58.95	37.05
5		98.60	99.00	77.05	58.60	59.00	37.05		98.55	98.90	a 77.00	58.55	58.90	37.00
6		98.60	99.00	77.05	58.60	59.00	37.05		98.50	98.90	a 77.00	58.50	58.90	37.00
7		98.60	99.00	77.05	58.60	59.00	37.05		98.45	98.85	a 77.00	58.45	58.85	37.00
8		98.60	99.00	77.05	58.60	59.00	37.05		98.40	98.80	a 77.00	58.40	58.80	37.00
9		98.60	99.00	77.05	58.60	59.00	37.05		98.35	98.80	a 77.00	58.35	58.80	37.00
10		98.60	99.00	77.05	58.60	59.00	37.05		98.35	98.80	a 77.00	58.35	58.80	37.00
11		98.60	99.00	77.05	58.60	59.00	37.05		98.30	98.80	a 77.00	58.30	58.80	37.00
12		98.60	99.00	77.05	58.60	59.00	37.05	1	98.25	98.75	a 77.00	58.25	58.75	37.00
13		98.60	99.00	77.05	58.60	59.00	37.05		98.25	98.75	a 77.00	58.25	58.75	37.00
14		98.60	99.00	77.05	58.60	59.00	37.05		98.25	98.70	a 77.00	58.25	58.70	37.00
15		98.60	99.00	77.05	58.60	59.00	37.05		98.25	98.70	a 77.00	58.25	58.70	37.00
16		98.60	99.00	77.05	58.60	59.00	37.05		98.25	98.70	a 77.00	58.25	58.70	37.00
17		98.60	99.00	77.05	58.60	59.00	37.05		98.30	98.75	a 77.00	58.30	58.75	37.00
18		98.60	99.00	77.05	58.60	59.00	37.05		98.30	98.75	a 77.00	58.30	58.75	37.00
19		98.60	99.00	77.05	58.60	59.00	37.05		98.30	98.75	a 77.00	58.30	58.75	37.00
20		98.60	99.00	77.05	58.60	59.00	37.05		98.30	98.75	a 77.00	58.30	58.75	37.00
21		98.60	99.00	77.05	58.60	59.00	37.05		98.30	98.75	a 77.00	58.30	58.75	37.00
22		98.60	99.00	77.05	58.60	59.00	37.05		98.35	98.80	a 77.00	58.35	58.80	37.00
23		98.60	99.00	77.05	58.60	59.00	37.05		98.35	98.80	a 77.00	58.35	58.80	37.00
24		98.65	99.05	77.05	58.65	59.05	37.05		98.35	98.80	a 77.00	58.35	58.80	37.00
25		98.65	99.05	77.05	58.65	59.05	37.05		98.35	98.80	a 77.00	58.35	58.80	37.00
26		98.65	99.05	77.05	58.65	59.05	37.05	d	98.40	98.85	a 77.00	58.40	58.85	37.00
27		98.65	99.05	77.05	58.65	59.05	37.05	2	98.40	98.85	a 77.00	58.40	58.85	37.00
28		98.65	99.05	77.05	58.65	59.05	37.05		98.40	98.85	a 77.00	58.40	58.85	37.00
29		98.65	99.05	77.05	58.65	59.05	37.05		98.50	98.90	77.05	58.50	58.90	37.05
30		98.65	99.05	77.05	58.65	59.05	37.05	3	98.55	98.90	77.05	58.55	58.90	37.05
31		98.65	99.05	77.05	58.65	59.05	37.05							

1. First ferry from Keewatin. (M.) 2. Ice all gone from bay. (M.) 3. Water steadily rising. (S.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	Footnote	MAY 1902 Local Datum Above Dam	Lake	Tail Water	Sea-level Datum Above Dam	Lake	Tail Water	Footnote	JUNE Local Datum Above Dam	Lake	Tail Water	Sea-level Datum Above Dam	Lake	Tail Water
1	...	98.60	98.95	77.05	1058.60	1058.95	1037.05	...	99.90	100.45	77.65	1059.90	1060.45	1037.65
2	...	98.75	a 99.00	77.10	58.75	59.00	37.10	...	99.90	100.45	77.65	59.90	60.45	37.65
3	...	98.80	99.05	77.10	58.80	59.05	37.10	...	99.90	100.45	77.70	59.90	60.45	37.70
4	...	98.85	99.10	77.10	58.85	59.10	37.10	...	99.95	100.50	77.70	59.95	60.50	37.70
5	...	98.85	99.20	77.10	58.85	59.20	37.10	...	a100.00	100.55	77.75	60.00	60.55	37.75
6	...	98.95	99.55	77.10	58.95	59.55	37.10	...	a100.00	100.50	77.75	60.00	60.50	37.75
7	...	99.05	99.65	77.10	59.05	59.65	37.10	2	99.90	100.50	a 78.00	59.90	60.50	38.00
8	1	99.25	99.80	77.15	59.25	59.80	37.15	...	99.80	100.40	a 80.00	59.80	60.40	40.00
9	...	99.30	99.90	77.20	59.30	59.90	37.20	...	99.60	100.20	82.05	59.60	60.20	42.05
10	...	99.35	99.95	77.20	59.35	59.95	37.20	...	98.50	100.50	82.10	58.50	60.50	42.10
11	...	99.35	99.95	77.20	59.35	59.95	37.20	...	98.45	100.55	82.15	58.45	60.55	42.15
12	d	99.40	a 100.00	77.25	59.40	60.00	37.25	...	97.75	100.60	82.15	57.75	60.60	42.15
13	...	99.40	a 100.00	77.25	59.40	60.00	37.25	...	97.50	100.65	82.20	57.50	60.65	42.20
14	...	99.40	a 100.00	77.25	59.40	60.00	37.25	...	97.35	100.60	82.25	57.35	60.60	42.25
15	...	99.45	100.05	77.30	59.45	60.05	37.30	...	a 97.00	100.60	82.30	57.00	60.60	42.30
16	...	99.45	100.05	77.35	59.45	60.05	37.35	3	96.50	100.65	82.35	56.50	60.65	42.35
17	...	99.50	100.10	77.35	59.50	60.10	37.35	...	96.20	100.65	82.35	56.20	60.65	42.35
18	...	99.50	100.10	77.35	59.50	60.10	37.35	4	95.10	100.60	82.40	55.10	60.60	42.40
19	...	99.55	100.15	77.35	59.55	60.15	37.35	...	a 94.00	100.50	82.50	54.00	60.50	42.50
20	...	99.55	100.15	77.40	59.55	60.15	37.40	...	a 93.00	100.35	84.50	53.00	60.35	44.50
21	...	99.55	100.15	77.45	59.55	60.15	37.45	...	a 92.00	100.30	a 85.00	52.00	60.30	45.00
22	...	99.60	100.15	77.50	59.60	60.15	37.50	...	a 92.00	100.35	a 86.00	52.00	60.35	46.00
23	...	99.65	100.20	77.50	59.65	60.20	37.50	5	a 92.00	100.40	a 86.00	52.00	60.40	46.00
24	...	99.70	100.25	77.55	59.70	60.25	37.55	...	92.10	100.45	a 86.00	52.10	60.45	46.00
25	...	99.75	100.30	77.60	59.75	60.30	37.60	...	a 92.00	100.40	a 86.00	52.00	60.40	46.00
26	...	99.80	100.35	77.60	59.80	60.35	37.60	...	a 92.00	100.35	a 86.00	52.00	60.35	46.00
27	...	99.85	100.40	77.60	59.85	60.40	37.60	...	91.95	100.30	a 86.00	51.95	60.30	46.00
28	...	99.85	100.40	77.60	59.85	60.40	37.60	...	91.95	100.35	86.10	51.95	60.35	46.10
29	...	99.85	100.40	77.60	59.85	60.40	37.60	...	91.90	100.35	86.20	51.90	60.35	46.20
30	...	99.85	100.40	77.60	59.85	60.40	37.60	...	91.95	100.35	86.20	51.95	60.35	46.20
31	...	99.90	100.45	77.60	59.90	60.45	37.60	...						
		JULY 1902							AUGUST					
1	...	91.95	100.35	86.20	1051.95	1060.35	1046.20	...	99.70	100.70	83.50	1059.70	1060.70	1043.50
2	...	91.95	100.40	86.25	51.95	60.40	46.25	...	99.70	100.70	83.50	59.70	60.70	43.50
3	...	a 92.00	100.40	86.25	52.00	60.40	46.25	...	99.65	100.60	83.50	59.65	60.60	43.50
4	...	a 92.00	100.45	86.25	52.00	60.45	46.25	...	99.70	100.70	83.50	59.70	60.70	43.50
5	...	92.05	100.50	86.30	52.05	60.50	46.30	...	99.65	100.65	83.40	59.65	60.65	43.40
6	...	92.05	100.55	86.30	52.05	60.55	46.30	...	99.65	100.60	a 83.00	59.65	60.60	43.00
7	...	92.05	100.55	86.30	52.05	60.55	46.30	...	99.65	100.55	82.75	59.65	60.55	42.75
8	...	92.10	100.60	86.30	52.10	60.60	46.30	...	99.60	100.50	82.50	59.60	60.50	42.50
9	...	92.10	100.60	86.30	52.10	60.60	46.30	...	99.50	100.60	82.45	59.50	60.60	42.45
10	...	92.10	100.60	86.30	52.10	60.60	46.30	...	99.50	100.60	82.40	59.50	60.60	42.40
11	...	92.10	100.60	86.30	52.10	60.60	46.30	...	99.50	100.65	82.35	59.50	60.65	42.35
12	...	92.10	100.60	86.30	52.10	60.60	46.30	...	99.55	100.70	82.30	59.55	60.70	42.30
13	...	92.05	100.55	86.30	52.05	60.55	46.30	...	99.55	100.70	82.30	59.55	60.70	42.30
14	...	92.05	100.55	86.30	52.05	60.55	46.30	...	99.55	100.65	82.30	59.55	60.65	42.30
15	...	a 92.00	100.55	86.30	52.00	60.55	46.30	...	99.55	100.65	82.30	59.55	60.65	42.30
16	...	a 92.00	100.50	86.25	52.00	60.50	46.25	...	99.60	100.65	82.25	59.60	60.65	42.25
17	...	a 92.00	100.50	86.25	52.00	60.50	46.25	...	99.55	100.60	82.25	59.55	60.60	42.25
18	...	a 92.00	100.45	86.25	52.00	60.45	46.25	...	99.55	100.60	82.25	59.55	60.60	42.25
19	6	a 92.00	100.45	86.25	52.00	60.45	46.25	...	99.55	100.60	82.20	59.55	60.60	42.20
20	...	92.05	100.45	86.25	52.05	60.45	46.25	...	99.55	100.60	82.20	59.55	60.60	42.20
21	...	92.05	100.50	86.25	52.05	60.50	46.25	...	99.55	100.60	82.20	59.55	60.60	42.20
22	...	a 93.00	100.50	86.20	53.00	60.50	46.20	...	99.50	100.60	82.20	59.50	60.60	42.20
23	...	94.50	100.50	83.70	54.50	60.50	43.70	...	99.50	100.60	82.15	59.50	60.60	42.15
24	...	99.60	100.55	83.70	59.60	60.55	43.70	...	99.50	100.55	82.15	59.50	60.55	42.15
25	...	99.60	100.60	83.70	59.60	60.60	43.70	...	99.50	100.55	82.15	59.50	60.55	42.15
26	...	99.60	100.65	83.70	59.60	60.65	43.70	...	99.50	100.60	82.15	59.50	60.60	42.15
27	...	99.65	100.70	83.65	59.65	60.70	43.65	...	99.50	100.60	82.10	59.50	60.60	42.10
28	...	99.65	100.65	83.60	59.65	60.65	43.60	...	99.40	100.65	82.10	59.40	60.65	42.10
29	...	99.70	100.70	83.60	59.70	60.70	43.60	...	99.40	100.60	82.05	59.40	60.60	42.05
30	...	99.70	100.70	83.50	59.70	60.70	43.50	...	99.35	100.60	82.05	59.35	60.60	42.05
31	...	99.70	100.70	83.50	59.70	60.70	43.50	...	99.30	100.55	a 82.00	59.30	60.55	42.00

1. Very windy. (M.) 2. Removed 52 stop logs. (R. B.) (S.) 3. I am removing five more stop logs from each gate. (S.) 4. Gale all day. (M.) 5. Removed more logs last week. There are now nine large logs out of each gate. The weather is clearing and we are not likely to have any more rain. (S.) 6. Started putting in stop logs Saturday, July 19. (R. B.) (S.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	Footnote	SEPTEMBER 1902 Local Datum Above Dam	Lake	Tail Water	Sea-level Datum Above Dam	Lake	Tail Water	Footnote	OCTOBER 1902 Local Datum Above Dam	Lake	Tail Water	Sea-level Datum Above Dam	Lake	Tail Water
1	...	99.30	100.50	a82.00	1059.30	1060.50	1042.00	...	a100.00	100.55	80.20	1060.00	1060.55	1040.20
2	...	99.30	100.50	a82.00	59.30	60.50	42.00	...	a100.00	100.55	80.20	60.00	60.55	40.20
3	...	99.30	100.50	a82.00	59.30	60.50	42.00	...	a100.00	100.55	80.20	60.00	60.55	40.20
4	...	99.80	100.50	80.45	59.80	60.50	40.45	...	99.95	100.50	80.20	59.95	60.50	40.20
5	...	99.85	100.50	80.40	59.85	60.50	40.40	...	99.95	100.50	80.20	59.95	60.50	40.20
6	...	99.90	100.45	80.35	59.90	60.45	40.35	...	a100.00	100.50	80.20	60.00	60.50	40.20
7	...	99.95	100.45	80.30	59.95	60.45	40.30	...	99.90	100.50	80.20	59.90	60.50	40.20
8	...	a100.00	100.45	80.30	60.00	60.45	40.30	...	99.95	100.55	80.20	59.95	60.55	40.20
9	...	a100.00	100.50	80.30	60.00	60.50	40.30	...	99.95	100.50	80.15	59.95	60.50	40.15
10	...	a100.00	100.55	80.25	60.00	60.55	40.25	...	99.95	100.50	80.15	59.95	60.50	40.15
11	...	a100.00	100.35	80.25	60.00	60.35	40.25	...	a100.00	100.55	80.15	60.00	60.55	40.15
12	...	99.90	100.35	80.20	59.90	60.35	40.20	...	a100.00	100.60	80.15	60.00	60.60	40.15
13	...	99.90	100.30	80.20	59.90	60.30	40.20	...	a100.00	100.60	80.15	60.00	60.60	40.15
14	...	99.80	100.30	80.20	59.80	60.30	40.20	...	100.05	100.60	80.15	60.05	60.60	40.15
15	...	99.80	100.30	80.20	59.80	60.30	40.20	...	a100.00	100.55	80.15	60.00	60.55	40.15
16	...	99.80	100.25	80.15	59.80	60.25	40.15	...	99.95	100.50	80.15	59.95	60.50	40.15
17	...	99.75	100.20	80.15	59.75	60.20	40.15	...	99.95	100.50	80.15	59.95	60.50	40.15
18	...	99.75	100.15	80.15	59.75	60.15	40.15	...	99.95	100.45	80.15	59.95	60.45	40.15
19	...	99.75	100.15	80.15	59.75	60.15	40.15	...	99.90	100.40	80.10	59.90	60.40	40.10
20	...	99.70	100.15	80.15	59.70	60.15	40.15	...	99.90	100.40	80.10	59.90	60.40	40.10
21	...	99.75	100.20	80.15	59.75	60.20	40.15	...	99.80	100.35	a80.00	59.80	60.35	40.00
22	...	99.80	100.25	80.15	59.80	60.25	40.15	...	99.75	100.30	79.90	59.75	60.30	39.90
23	...	99.80	100.30	80.15	59.80	60.30	40.15	...	99.75	100.30	79.85	59.75	60.30	39.85
24	...	99.80	100.30	80.15	59.80	60.30	40.15	...	99.70	100.30	79.75	59.70	60.30	39.75
25	...	99.85	100.35	80.15	59.85	60.35	40.15	...	99.75	100.30	79.70	59.75	60.30	39.70
26	...	99.85	100.35	80.20	59.85	60.35	40.20	...	99.75	100.35	79.70	59.75	60.35	39.70
27	...	99.90	100.40	80.20	59.90	60.40	40.20	...	99.70	100.30	79.65	59.70	60.30	39.65
28	...	99.90	100.45	80.20	59.90	60.45	40.20	...	99.85	100.35	79.65	59.85	60.35	39.60
29	...	99.95	100.50	80.20	59.95	60.50	40.20	...	a100.00	100.40	79.60	60.00	60.40	39.60
30	...	99.95	100.50	80.20	59.95	60.50	40.20	...	99.95	100.40	79.55	59.95	60.40	39.55
31	...							...	99.90	100.35	79.50	59.90	60.35	39.50

Date	Footnote	NOVEMBER 1902 Local Datum Above Dam	Lake	Tail Water	Sea-level Datum Above Dam	Lake	Tail Water	Footnote	DECEMBER 1902 Local Datum Above Dam	Lake	Tail Water	Sea-level Datum Above Dam	Lake	Tail Water
1	...	99.85	100.35	79.50	1059.85	1060.35	1039.50	...	99.65	100.30	79.30	1059.65	1060.30	1039.30
2	...	99.85	100.35	79.50	59.85	60.35	39.50	...	99.65	100.30	79.30	59.65	60.30	39.30
3	...	99.85	100.30	79.50	59.85	60.30	39.50	...	99.70	100.40	79.30	59.70	60.40	39.30
4	...	99.80	100.30	79.40	59.80	60.30	39.40	...	99.75	100.40	79.30	59.75	60.40	39.30
5	...	99.80	100.30	79.40	59.80	60.30	39.40	...	99.85	100.40	79.30	59.85	60.40	39.30
6	...	99.80	100.25	79.35	59.80	60.25	39.35	...	99.90	100.35	79.30	59.90	60.35	39.30
7	...	99.75	100.25	79.35	59.75	60.25	39.35	...	99.95	100.35	79.30	59.95	60.35	39.30
8	...	99.75	100.20	79.35	59.75	60.20	39.35	...	100.05	100.35	79.30	60.05	60.35	39.30
9	...	99.70	100.20	79.35	59.70	60.20	39.35	...	100.05	100.35	79.30	60.05	60.35	39.30
10	...	99.70	100.20	79.30	59.70	60.20	39.30	...	100.05	100.35	79.30	60.05	60.35	39.30
11	...	99.70	100.25	79.30	59.70	60.25	39.30	...	100.05	100.35	79.30	60.05	60.35	39.30
12	...	99.75	100.30	79.30	59.75	60.30	39.30	...	a100.00	100.30	79.25	60.00	60.30	39.25
13	...	99.75	100.35	79.30	59.75	60.35	39.30	...	a100.00	100.30	79.25	60.00	60.30	39.25
14	...	99.80	100.35	79.35	59.80	60.35	39.35	...	a100.00	100.30	79.25	60.00	60.30	39.25
15	...	99.85	100.40	79.35	59.85	60.40	39.35	...	a100.00	100.30	79.25	60.00	60.30	39.25
16	...	99.90	100.45	79.35	59.90	60.45	39.35	...	a100.00	100.30	79.25	60.00	60.30	39.25
17	...	99.95	100.50	79.35	59.95	60.50	39.35	...	a100.00	100.30	79.25	60.00	60.30	39.25
18	...	99.95	100.50	79.35	59.95	60.50	39.35	...	99.95	100.25	79.25	59.95	60.25	39.25
19	...	99.95	100.50	79.35	59.95	60.50	39.35	...	99.95	100.25	79.20	59.95	60.25	39.20
20	...	99.80	100.45	79.35	59.80	60.45	39.35	...	99.95	100.25	79.20	59.95	60.25	39.20
21	...	99.80	100.45	79.35	59.80	60.45	39.35	...	99.90	100.20	79.20	59.90	60.20	39.20
22	...	99.80	100.45	79.30	59.80	60.45	39.30	...	99.90	100.20	79.20	59.90	60.20	39.20
23	...	99.75	100.45	79.30	59.75	60.45	39.30	...	99.85	100.15	79.15	59.85	60.15	39.15
24	...	99.75	100.40	79.30	59.75	60.40	39.30	...	99.80	100.10	79.15	59.80	60.10	39.15
25	1	99.75	100.40	79.30	59.75	60.40	39.30	...	99.80	100.10	79.15	59.80	60.10	39.15
26	...	99.70	100.40	79.30	59.70	60.40	39.30	...	99.80	100.10	79.15	59.80	60.10	39.15
27	...	99.70	100.35	79.30	59.70	60.35	39.30	...	99.75	100.05	79.15	59.75	60.05	39.15
28	...	99.70	100.35	79.30	59.70	60.35	39.30	...	99.75	100.05	79.15	59.75	60.05	39.15
29	2	99.65	100.35	79.30	59.65	60.35	39.30	...	99.70	a100.00	79.15	59.70	60.00	39.15
30	3	99.65	100.35	79.30	59.65	60.35	39.30	...	99.70	100.05	79.15	59.70	60.05	39.15
31	...							...	99.70	100.05	79.15	59.70	60.05	39.15

1. Bay partly frozen. (M.) 2. Last ferry from Keewatin. (M.) 3. Bay all frozen; skating. (M.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	Footnote	JANUARY 1903						Footnote	FEBRUARY					
		Local Datum			Sea-level Datum				Local Datum			Sea-level Datum		
		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1	1	99.65	100.05	79.15	1059.65	1060.05	1039.15	...	100.10	100.45	79.10	1060.10	1060.45	1039.10
2	...	99.70	100.10	79.15	59.70	60.10	39.15	...	100.10	100.45	79.10	60.10	60.45	39.10
3	...	99.70	100.10	79.15	59.70	60.10	39.15	...	100.10	100.45	79.10	60.10	60.45	39.10
4	...	99.75	100.10	79.10	59.75	60.10	39.10	...	100.10	100.45	79.10	60.10	60.45	39.10
5	...	99.80	100.15	79.10	59.80	60.15	39.10	...	100.10	100.45	79.10	60.10	60.45	39.10
6	...	99.85	100.20	79.10	59.85	60.20	39.10	...	100.10	100.45	79.10	60.10	60.45	39.10
7	...	99.90	100.25	79.10	59.90	60.25	39.10	...	100.10	100.45	79.10	60.10	60.45	39.10
8	...	99.90	100.30	79.10	59.90	60.30	39.10	...	100.10	100.45	79.10	60.10	60.45	39.10
9	...	99.95	100.35	79.10	59.95	60.35	39.10	...	100 10	100.45	79.10	60.10	60.45	39.10
10	...	99.95	100.35	79.10	59.95	60.35	39.10	...	100 10	100.45	79.10	60.10	60.45	39.10
11	...	a 100.00	100.35	79.05	60.00	60.35	39.05	...	100.10	100.45	79.10	60.10	60.45	39.10
12	...	a 100.00	100.35	79.05	60.00	60.35	39.05	...	100.10	100.45	79.10	60.10	60.45	39.10
13	...	a 100.00	100.35	79.05	60.00	60.35	39.05	...	100.10	100.45	79.10	60.10	60.45	39.10
14	...	a 100.00	100.35	79.05	60.00	60.35	39.05	...	100.10	100.45	79.10	60.10	60.45	39.10
15	...	100.05	100.35	79.05	60.05	60.35	39.05	...	100.05	100.40	79.10	60.05	60.40	39.10
16	...	100.05	100.35	79.05	60.05	60.35	39.05	...	100.05	100.40	79.05	60.05	60.40	39.05
17	...	100.05	100 40	79.05	60.05	60.40	39.05	...	100.05	100.40	79.05	60.05	60.40	39.05
18	...	100.05	100.40	79.05	60.05	60.40	39.05	...	100.05	100.40	79.05	60.05	60.40	39.05
19	...	100.10	100.40	79.10	60.10	60.40	39.10	...	100.05	100.40	79.05	60.05	60.40	39.05
20	...	100.10	100.45	79.10	60.10	60.45	39.10	...	100.05	100.40	79.05	60.05	60.40	39.05
21	...	100.10	100.45	79.10	60.10	60.45	39.10	...	100.05	100.40	79.05	60.05	60.40	39.05
22	...	100.10	100.45	79.10	60.10	60.45	39.10	...	100.05	100.40	79.05	60.05	60.40	39.05
23	...	100.10	100.45	79.10	60.10	60.45	39.10	...	100.05	100.40	79.05	60.05	60.40	39.05
24	...	100.15	100.50	79.10	60.15	60.50	39.10	...	100.05	100.40	79.05	60.05	60.40	39.05
25	...	100.15	100.50	79.10	60.15	60.50	39.10	...	100.05	100.40	79.05	60.05	60.40	39.05
26	...	100.15	100.50	79.10	60.15	60.50	39.10	...	100.05	100.40	79.05	60.05	60.40	39.05
27	...	100.15	100.50	79.10	60.15	60.50	39.10	...	100.00	100.35	79.00	60.00	60.35	39.00
28	...	100.15	100.50	79.10	60.15	60.50	39.10	...	100.00	100.35	79.00	60.00	60.35	39.00
29	...	100.15	100.50	79.10	60.15	60.50	39.10	...						
30	...	100.15	100.50	79.10	60.15	60.50	39.10	...						
31	...	100.10	100.45	79.10	60.10	60.45	39.10	...						

		MARCH 1903							APRIL					
1	...	99.95	100.30	79.00	1059.95	1060.30	1039.00	...	99.55	100.05	78.60	1059.55	1060.05	1038.60
2	...	99.95	100.30	78.99	59.95	60.30	38.99	...	99.55	100.05	78.55	59.55	60.05	38.55
3	...	99.95	100.30	78.99	59.95	60.30	38.99	...	99.50	100.00	78.55	59.50	60.00	38.55
4	...	99.95	100.30	78.99	59.95	60.30	38.99	...	99.50	100.00	78.50	59.50	60.00	38.50
5	...	99.95	100.30	78.99	59.95	60.30	38.99	...	99.45	100.00	78.50	59.45	60.00	38.50
6	...	99.95	100.30	78.99	59.95	60.30	38.99	...	99.45	100.00	78.50	59.45	60.00	38.50
7	...	99.95	100.30	78.99	59.95	60.30	38.99	...	99.45	a 100.00	78.50	59.45	60.00	38.50
8	...	99.90	100.30	78.99	59.90	60.30	38.99	...	99.45	a 100.00	78.50	59.45	60.00	38.50
9	...	99.90	100.30	78.99	59.90	60.30	38.99	...	99.45	100.05	78.50	59.45	60.05	38.50
10	...	99.90	100.30	78.99	59.90	60.30	38.99	...	99.50	100.05	78.50	59.50	60.05	38.50
11	...	99.90	100.30	78.99	59.90	60.30	38.99	...	99.50	100.05	78.50	59.50	60.05	38.50
12	...	99.85	100.30	78.99	59.85	60.30	38.99	...	99.50	100.10	78.55	59.50	60.10	38.55
13	...	99.85	100.25	78.95	59.85	60.25	38.95	...	99.55	100.10	78.55	59.55	60.10	38.55
14	...	99.85	100.25	78.95	59.85	60.25	38.95	...	99.55	100.15	78.55	59.55	60.15	38.55
15	...	99.85	100.25	78.95	59.85	60.25	38.95	...	99.55	100.20	78.60	59.55	60.20	38.60
16	...	99.80	100.25	78.95	59.80	60.25	38.95	2	99.55	100.30	78.60	59.55	60.30	38.60
17	...	99.80	100.20	78.95	59.80	60.20	38.95	...	99.55	100.35	78.60	59.55	60.35	38.60
18	...	99.80	100.20	78.90	59.80	60.20	38.90	...	99.55	100.35	78.60	59.55	60.35	38.60
19	...	99.80	100.20	78.90	59.80	60.20	38.90	...	99.60	100.40	78.65	59.60	60.40	38.65
20	...	99.75	100.20	78.85	59.75	60.20	38.85	...	99.60	100.40	78.65	59.60	60.40	38.65
21	...	99.75	100.20	78.85	59.75	60.20	38.85	...	99.60	100.40	78.65	59.60	60.40	38.65
22	...	99.75	100.20	78.80	59.75	60.20	38.80	...	99.60	100.40	78.65	59.60	60.40	38.65
23	...	99.70	100.15	78.80	59.70	60.15	38.80	...	99.65	100.45	78.65	59.65	60.45	38.65
24	...	99.70	100.15	78.75	59.70	60.15	38.75	3	99.65	100.50	78.70	59.65	60.50	38.70
25	...	99.70	100.15	78.75	59.70	60.15	38.75	...	99.70	100.50	78.70	59.70	60.50	38.70
26	...	99.65	100.15	78.75	59.65	60.15	38.75	...	99.70	100.50	78.70	59.70	60.50	38.70
27	...	99.65	100.10	78.70	59.65	60.10	38.70	4	99.75	100.55	78.70	59.75	60.55	38.70
28	...	99.65	100.10	78.70	59.65	60.10	38.70	...	99.90	100.60	78.70	59.90	60.60	38.70
29	...	99.60	100.10	78.65	59.60	60.10	38.65	...	99.95	100.75	78.70	59.95	60.75	38.70
30	...	99.60	100.05	78.65	59.60	60.05	38.65	...	99.95	100.80	78.70	59.95	60.80	38.70
31	...	99.60	100.05	78.60	59.60	60.05	38.60	...						

1. Water rising up lake and spoiling ice for travel. (Dec. 30 to Jan. 12.) (R. B.) 2. Ice going out of bay. (M.) 3. Strong S. wind. (M.) 4. S. wind. (M.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	May 1903							June 1903						
	Footnote	Local Datum			Sea-level Datum			Footnote	Local Datum			Sea-level Datum		
		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water		Above dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1	...	100.10	100.85	78.70	1060.10	1060.85	1038.70	...	100.05	101.05	83.20	1060.05	1061.05	1043.20
2	...	100.15	100.95	78.70	60.15	60.95	38.70	...	100.05	101.05	83.20	60.05	61.05	43.20
3	...	100.25	101.10	78.70	60.25	61.10	38.70	...	100.10	101.05	83.20	60.10	61.05	43.20
4	1	a99.00	101.10	79.30	59.00	61.10	39.30	...	100.10	101.10	83.25	60.10	61.10	43.25
5	...	97.30	a 101.00	81.10	57.30	61.00	41.10	...	100.10	101.10	83.25	60.10	61.10	43.25
6	...	96.40	100.90	82.50	56.40	60.90	42.50	...	100.05	101.10	83.25	60.05	61.10	43.25
7	2	95.50	100.90	a 83.00	55.50	60.90	43.00	...	100.05	101.05	83.25	60.05	61.05	43.25
8	3	95.90	100.90	a 83.00	55.90	60.90	43.00	...	100.05	101.05	83.25	60.05	61.05	43.25
9	...	95.90	100.90	83.05	55.90	60.90	43.05	...	100.05	101.05	83.25	60.05	61.05	43.25
10	...	95.90	100.90	83.10	55.90	60.90	43.10	...	100.05	101.05	83.25	60.05	61.05	43.25
11	...	95.90	100.90	83.15	55.90	60.90	43.15	...	100.05	101.05	83.25	60.05	61.05	43.25
12	...	95.90	100.90	83.20	55.90	60.90	43.20	4	100.05	101.05	83.25	60.05	61.05	43.25
13	...	95.95	100.95	83.20	55.95	60.95	43.20	...	100.05	101.05	83.25	60.05	61.05	43.25
14	...	95.95	100.95	83.20	55.95	60.95	43.20	...	100.05	101.05	83.25	60.05	61.05	43.25
15	...	95.95	100.95	83.20	55.95	60.95	43.20	...	100.05	101.05	83.25	60.05	61.05	43.25
16	...	a100.00	a 101.00	83.20	60.00	61.00	43.20	...	100.05	101.05	83.25	60.05	61.05	43.25
17	...	a100.00	a 101.00	83.15	60.00	61.00	43.15	...	100.05	101.05	83.25	60.05	61.05	43.25
18	...	a100.00	a 101.00	83.15	60.00	61.00	43.15	...	100.05	101.05	83.30	60.05	61.05	43.30
19	...	a100.00	a 101.00	83.15	60.00	61.00	43.15	...	a100.00	a101.00	83.30	60.00	61.00	43.30
20	...	a100.00	a 101.00	83.15	60.00	61.00	43.15	...	100.05	101.05	83.30	60.05	61.05	43.30
21	...	a100.00	a 101.00	83.15	60.00	61.00	43.15	...	100.05	101.05	83.30	60.05	61.05	43.30
22	...	95.95	a 101.00	83.15	55.95	61.00	43.15	...	100.10	101.10	83.25	60.10	61.10	43.25
23	...	95.95	a 101.00	83.15	55.95	61.00	43.15	...	100.10	101.10	83.25	60.10	61.10	43.25
24	...	a100.00	a 101.00	83.15	60.00	61.00	43.15	...	100.10	101.05	83.25	60.10	61.05	43.25
25	...	a100.00	a 101.00	83.20	60.00	61.00	43.20	...	100.05	101.05	83.25	60.05	61.05	43.25
26	...	100.05	a 101.00	83.20	60.05	61.00	43.20	...	100.05	101.05	83.25	60.05	61.05	43.25
27	...	100.05	a 101.00	83.20	60.05	61.00	43.20	...	100.05	101.05	83.25	60.05	61.05	43.25
28	...	100.05	a 101.00	83.20	60.05	61.00	43.20	5	100.05	101.05	83.25	60.05	61.05	43.25
29	...	100.05	a 101.00	83.20	60.05	61.00	43.20	...	100.05	a101.00	83.25	60.05	61.00	43.25
30	...	100.05	101.05	83.20	60.05	61.05	43.20	...	100.05	a101.00	83.20	60.05	61.00	43.20
31	...	100.05	101.05	83.20	60.05	61.05	43.20	...						

Date	July 1903							August 1903						
	Footnote	Local Datum			Sea-level Datum			Footnote	Local Datum			Sea-level Datum		
		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water		Above dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1	...	a100.00	a 101.00	83.20	1060.00	1061.00	1043.20	7	.....	.....	.....	.....	.....	.....
2	...	a100.00	a 101.00	83.20	60.00	61.00	43.20	...	.....	.....	.....	.....	.....	.....
3	...	a100.00	a 101.00	83.20	60.00	61.00	43.20	...	.....	.....	.....	.....	.....	.....
4	...	99.90	100.90	83.15	59.90	60.90	43.15	...	.....	.....	.....	.....	.....	.....
5	...	99.90	100.90	83.15	59.90	60.90	43.15	...	.....	.....	.....	.....	.....	.....
6	...	99.80	100.85	83.15	59.80	60.85	43.15	...	.....	.....	.....	.....	.....	.....
7	...	99.75	100.85	83.15	59.75	60.85	43.15	...	.....	.....	.....	.....	.....	.....
8	...	99.70	100.85	83.15	59.70	60.85	43.15	...	.....	.....	.....	.....	.....	.....
9	...	a 98.00	100.80	83.10	58.00	60.80	43.10	...	.....	.....	.....	.....	.....	.....
10	...	a 98.00	100.80	83.10	58.00	60.80	43.10	...	.....	.....	.....	.....	.....	.....
11	...	97.95	100.75	83.10	57.95	60.75	43.10	...	.....	.....	.....	.....	.....	.....
12	...	97.95	100.70	83.10	57.95	60.70	43.10	...	.....	.....	.....	.....	.....	.....
13	...	97.90	100.70	83.10	57.90	60.70	43.10	...	.....	.....	.....	.....	.....	.....
14	...	97.90	100.65	83.10	57.90	60.65	43.10	...	.....	.....	.....	.....	.....	.....
15	...	97.85	100.60	83.10	57.85	60.60	43.10	...	.....	.....	.....	.....	.....	.....
16	...	97.85	100.55	83.10	57.85	60.55	43.10	...	.....	.....	.....	.....	.....	.....
17	...	97.85	100.55	83.10	57.85	60.55	43.10	8	.....	c 101.20	.....	.....	.....	.....
18	...	97.85	100.50	83.10	57.85	60.50	43.10	...	.....	c 101.20	.....	.....	.....	.....
19	...	97.85	100.45	83.05	57.85	60.45	43.05	...	.....	c 101.20	.....	.....	.....	.....
20	...	97.85	100.45	83.05	57.85	60.45	43.05	...	.....	c 101.20	.....	.....	.....	.....
21	6	.....	.....	.....	.....	.....	.....	...	.....	c 101.20	.....	.....	.....	.....
22	...	.....	.....	.....	.....	.....	.....	...	.....	c 101.20	.....	.....	.....	.....
23	...	.....	.....	.....	.....	.....	.....	...	.....	c 101.20	.....	.....	.....	.....
24	...	.....	.....	.....	.....	.....	.....	...	99.90	c 101.20	82.60	1059.90	.....	1042.60
25	...	.....	.....	.....	.....	.....	.....	...	99.90	c 101.20	82.60	59.90	.....	42.60
26	...	.....	.....	.....	.....	.....	.....	...	99.90	c 101.20	82.60	59.90	.....	42.60
27	...	.....	.....	.....	.....	.....	.....	...	99.60	c 101.10	82.50	59.60	.....	42.50
28	...	.....	.....	.....	.....	.....	.....	...	99.55	100.20	82.00	59.55	1060.20	42.00
29	...	.....	.....	.....	.....	.....	.....	...	99.55	100.20	82.00	59.55	60.20	42.00
30	...	.....	.....	.....	.....	.....	.....	9	99.55	100.20	82.00	59.55	60.20	42.00
31	...	.....	.....	.....	.....	.....	.....	...	.....	.....	.....	.....	.....	.....

1. Taking out logs. (May 4, 5, 6.) (R. B.) 2. 152 logs out. (R. B.) 3. Lake water very steady. (May 8-31.) (S.) 4. S. wind, heavy. (M.) 5. Water level keeps steady, varying only with wind; weather dry. (S.) 6. Records for this period are missing. (Engrs.) 7. On July 29, 1903, the resignation of Alexander McQuarrie as caretaker was accepted, to take effect Aug. 1, 1903. Napoleon Lemay was appointed caretaker on July 29, 1903, his appointment to date from Aug. 1, 1903. (See introductory comments regarding unreliability of Lemay's records.) (Engrs.) 8. Gauges at tail-water and at the dam lost; putting new ones. (Aug. 17-23.) (R. B.) (S.) 9. I have found the gauge below the dam. (R. B.) (S.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	SEPTEMBER 1903							OCTOBER						
	Footnote	Local Datum			Sea-level Datum			Footnote	Local Datum			Sea-level Datum		
		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1	†*	c 70.	c 100. 10	c 80.	.....	.....	.....	†*	c 60.	c 100.	c 60.	.....	.....	.....
2		70.	100. 10	80.	.....	.....	.....		60.	100.	60.	.....	.....	.....
3	...	70.	100. 10	80.	.....	.....	.....	...	60.	100.	60.	.....	.....	.....
4	...	70.	100. 10	80.	.....	.....	.....	...	60.	100.	60.	.....	.....	.....
5	...	70.	100. 10	80.	.....	.....	.....	...	60.	100.	60.	.....	.....	.....
6	...	70.	100. 10	80.	.....	.....	.....	...	60.	100.	60.	.....	.....	.....
7	...	70.	100.	70.	.....	.....	.....	...	60.	100.	60.	.....	.....	.....
8	...	70.	100.	70.	.....	.....	.....	...	60.	100.	60.	.....	.....	.....
9	...	70.	100.	70.	.....	.....	.....	...	80.	120.	82.	.....	.....	.....
10	...	60.	100.	70.	.....	.....	.....	...	80.	120.	82.	.....	.....	.....
11	...	60.	100.	70.	.....	.....	.....	...	80.	120.	82.	.....	.....	.....
12	1	60.	100.	70.	.....	.....	.....	...	80.	120.	82.	.....	.....	.....
13	...	60.	100.	70.	.....	.....	.....	...	80.	120.	82.	.....	.....	.....
14	...	60.	100.	70.	.....	.....	.....	...	80.	120.	82.	.....	.....	.....
15	...	80.	120.	80.	.....	.....	.....	...	80.	120.	82.	.....	.....	.....
16	...	80.	120.	80.	.....	.....	.....	...	90.	130.	91.	.....	.....	.....
17	...	80.	120.	80.	.....	.....	.....	...	90.	130.	91.	.....	.....	.....
18	...	80.	120.	80.	.....	.....	.....	...	90.	130.	91.	.....	.....	.....
19	...	80.	120.	80.	.....	.....	.....	...	90.	130.	91.	.....	.....	.....
20	...	80.	120.	70.	.....	.....	.....	...	90.	130.	91.	.....	.....	.....
21	...	80.	120.	70.	.....	.....	.....	...	90.	130.	91.	.....	.....	.....
22	...	80.	120.	70.	.....	.....	.....	...	90.	130.	91.	.....	.....	.....
23	...	70.	110.	70.	.....	.....	.....	...	.....	.....	.....	.....	.....	.....
24	...	70.	110.	70.	.....	.....	.....	...	.....	.....	.....	.....	.....	.....
25	...	70.	110.	70.	.....	.....	.....	...	.....	.....	.....	.....	.....	.....
26	...	60.	100.	70.	.....	.....	.....	...	.....	.....	.....	.....	.....	.....
27	...	60.	100.	60.	.....	.....	.....	...	.....	.....	.....	.....	.....	.....
28	...	60.	100.	60.	.....	.....	.....	...	.....	.....	.....	.....	.....	.....
29	...	60.	100.	60.	.....	.....	.....	...	.....	.....	.....	.....	.....	.....
30	...	60.	100.	60.	.....	.....	.....	...	.....	.....	.....	.....	.....	.....
31	...	.....	.....	.....	.....	.....	.....	...	.....	.....	.....	.....	.....	.....

Date	NOVEMBER 1903							DECEMBER						
	Footnote	Local Datum			Sea-level Datum			Footnote	Local Datum			Sea-level Datum		
		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1	†*	99. 85	100. 30	79. 20	1059. 85	1060. 30	1039. 20	†*	99. 60	99. 98	78. 98	1059. 60	1059. 98	1038. 98
2	...	99. 85	100. 30	79. 20	59. 85	60. 30	39. 20	...	99. 60	99. 98	78. 98	59. 60	59. 98	38. 98
3	...	99. 85	100. 30	79. 20	59. 85	60. 30	39. 20	...	99. 60	99. 98	78. 98	59. 60	59. 98	38. 98
4	...	99. 80	100. 25	79. 15	59. 80	60. 25	39. 15	...	99. 60	99. 98	78. 98	59. 60	59. 98	38. 98
5	...	99. 80	100. 25	79. 15	59. 80	60. 25	39. 15	...	99. 60	99. 98	78. 98	59. 60	59. 98	38. 98
6	...	99. 80	100. 25	79. 15	59. 80	60. 25	39. 15	...	99. 60	99. 98	78. 98	59. 60	59. 98	38. 98
7	...	99. 75	100. 20	79. 10	59. 75	60. 20	39. 10	...	99. 60	99. 98	78. 98	59. 60	59. 98	38. 98
8	...	99. 75	100. 20	79. 10	59. 75	60. 20	39. 10	...	99. 60	99. 98	78. 98	59. 60	59. 98	38. 98
9	2	99. 75	100. 20	79. 10	59. 75	60. 20	39. 10	...	99. 59	99. 97	78. 97	59. 59	59. 97	38. 97
10	...	99. 75	100. 20	79. 10	59. 75	60. 20	39. 10	...	99. 59	99. 97	78. 97	59. 59	59. 97	38. 97
11	...	99. 75	100. 15	79. 10	59. 75	60. 15	39. 10	...	99. 59	99. 97	78. 97	59. 59	59. 97	38. 97
12	...	99. 75	100. 15	79. 10	59. 75	60. 15	39. 10	...	99. 59	99. 97	78. 97	59. 59	59. 97	38. 97
13	...	99. 70	100. 15	79. 10	59. 70	60. 15	39. 10	...	99. 59	99. 97	78. 97	59. 59	59. 97	38. 97
14	...	99. 70	100. 15	79. 10	59. 70	60. 15	39. 10	...	99. 59	99. 97	78. 97	59. 59	59. 97	38. 97
15	...	99. 70	100. 10	79. 10	59. 70	60. 10	39. 10	...	99. 59	99. 97	78. 97	59. 59	59. 97	38. 97
16	...	99. 70	100. 10	79. 05	59. 70	60. 10	39. 05	...	99. 59	99. 97	78. 97	59. 59	59. 97	38. 97
17	...	99. 70	100. 10	79. 05	59. 70	60. 10	39. 05	...	99. 59	99. 97	78. 97	59. 59	59. 97	38. 97
18	...	99. 70	100. 10	79. 05	59. 70	60. 10	39. 05	...	99. 59	99. 97	78. 97	59. 59	59. 97	38. 97
19	...	99. 70	100. 05	79. 05	59. 70	60. 05	39. 05	...	99. 59	99. 97	78. 97	59. 59	59. 97	38. 97
20	...	99. 70	100. 05	79. 05	59. 70	60. 05	39. 05	...	99. 59	99. 97	78. 97	59. 59	59. 97	38. 97
21	...	99. 65	a 100. 00	78. 99	59. 65	60. 00	38. 99	...	99. 59	99. 97	78. 97	59. 59	59. 97	38. 97
22	...	99. 65	a 100. 00	78. 99	59. 65	60. 00	38. 99	...	99. 59	99. 97	78. 97	59. 59	59. 97	38. 97
23	...	99. 65	a 100. 00	78. 99	59. 65	60. 00	38. 99	...	99. 59	99. 97	78. 97	59. 59	59. 97	38. 97
24	...	99. 65	a 100. 00	78. 99	59. 65	60. 00	38. 99	...	99. 59	99. 97	78. 97	59. 59	59. 97	38. 97
25	...	99. 65	a 100. 00	78. 99	59. 65	60. 00	38. 99	...	99. 59	99. 97	78. 97	59. 59	59. 97	38. 97
26	...	99. 65	a 100. 00	78. 99	59. 65	60. 00	38. 99	...	99. 59	99. 97	78. 97	59. 59	59. 97	38. 97
27	...	99. 65	a 100. 00	78. 99	59. 65	60. 00	38. 99	...	99. 59	99. 97	78. 97	59. 59	59. 97	38. 97
28	...	99. 65	a 100. 00	78. 99	59. 65	60. 00	38. 99	...	99. 59	99. 97	78. 97	59. 59	59. 97	38. 97
29	...	99. 65	a 100. 00	78. 99	59. 65	60. 00	38. 99	...	99. 59	99. 97	78. 97	59. 59	59. 97	38. 97
30	...	99. 65	a 100. 00	78. 99	59. 65	60. 00	38. 99	...	99. 59	99. 97	78. 97	59. 59	59. 97	38. 97
31	...	.....	.....	.....	.....	.....	.....	...	.....	.....	.....	.....	.....	.....

* Records of Napoleon Lemay. See introductory comments. (Engrs.)
† All records for this month considered unreliable. (Engrs.)

1. Rain, snow, very heavy storm. (M.)
2. These levels are according to the instructions given me by Mr. Burton, Government Inspector, on Nov. 9, 1903. (R. B.) (S.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

JANUARY 1904

Date	Footnote	Local Datum			Sea-level Datum			Footnote	Local Datum			Sea-level Datum		
		Above Dam	Lake	Tail Water	Above Dam	Lake	Water Tail		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1	*	99.50	99.95	78.95	1059.50	1059.95	1038.95	*	99.40	99.80	78.90	1059.40	1059.80	1038.90
2	...	99.50	99.95	78.95	59.50	59.95	38.95	...	99.40	99.80	78.90	59.40	59.80	38.90
3	...	99.50	99.95	78.95	59.50	59.95	38.95	...	99.40	99.80	78.90	59.40	59.80	38.90
4	...	99.50	99.95	78.95	59.50	59.95	38.95	...	99.40	99.80	78.90	59.40	59.80	38.90
5	...	99.50	99.95	78.95	59.50	59.95	38.95	...	99.40	99.80	78.90	59.40	59.80	38.90
6	...	99.50	99.95	78.95	59.50	59.95	38.95	...	99.40	99.80	78.90	59.40	59.80	38.90
7	...	99.50	99.95	78.95	59.50	59.95	38.95	...	99.30	99.80	78.85	59.30	59.80	38.85
8	...	99.50	99.95	78.95	59.50	59.95	38.95	...	99.30	99.80	78.85	59.30	59.80	38.85
9	...	99.50	99.95	78.95	59.50	59.95	38.95	...	99.30	99.80	78.85	59.30	59.80	38.85
10	...	99.50	99.95	78.95	59.50	59.95	38.95	...	99.30	99.80	78.85	59.30	59.80	38.85
11	...	99.50	99.95	78.95	59.50	59.95	38.95	...	99.30	99.80	78.85	59.30	59.80	38.85
12	...	99.50	99.95	78.95	59.50	59.95	38.95	...	99.30	99.80	78.80	59.30	59.80	38.80
13	...	99.50	99.95	78.95	59.50	59.95	38.95	...	99.30	99.80	78.80	59.30	59.80	38.80
14	...	99.50	99.95	78.95	59.50	59.95	38.95	...	99.30	99.80	78.80	59.30	59.80	38.80
15	...	99.50	99.95	78.95	59.50	59.95	38.95	...	99.30	99.80	78.80	59.30	59.80	38.80
16	...	99.45	99.90	78.95	59.45	59.90	38.95	...	99.40	99.80	78.90	59.40	59.80	38.90
17	...	99.45	99.90	78.95	59.45	59.90	38.95	...	99.40	99.80	78.90	59.40	59.80	38.90
18	...	99.45	99.90	78.95	59.45	59.90	38.95	...	99.40	99.80	78.90	59.40	59.80	38.90
19	...	99.45	99.90	78.90	59.45	59.90	38.90	...	99.40	99.80	78.90	59.40	59.80	38.90
20	...	99.40	99.90	78.90	59.40	59.90	38.90	...	99.40	99.80	78.90	59.40	59.80	38.90
21	...	99.40	99.90	78.90	59.40	59.90	38.90	...	99.40	99.80	78.90	59.40	59.80	38.90
22	...	99.40	99.90	78.90	59.40	59.90	38.90	...	99.30	99.80	78.85	59.30	59.80	38.85
23	...	99.40	99.85	78.90	59.40	59.85	38.90	...	99.30	99.80	78.85	59.30	59.80	38.85
24	...	99.40	99.85	78.90	59.40	59.85	38.90	...	99.30	99.80	78.85	59.30	59.80	38.85
25	...	99.40	99.85	78.90	59.40	59.85	38.90	...	99.30	99.80	78.85	59.30	59.80	38.85
26	...	99.40	99.85	78.90	59.40	59.85	38.90	...	99.30	99.80	78.80	59.30	59.80	38.80
27	...	99.40	99.85	78.90	59.40	59.85	38.90	...	99.30	99.80	78.80	59.30	59.80	38.80
28	...	99.40	99.85	78.90	59.40	59.85	38.90	...	99.30	99.80	78.80	59.30	59.80	38.80
29	...	99.40	99.85	78.90	59.40	59.85	38.90	...	99.30	99.80	78.80	59.30	59.80	38.80
30	...	99.40	99.85	78.90	59.40	59.85	38.90	...	.....	.....	.....	.....	.....	.....
31	...	99.40	99.85	78.90	59.40	59.85	38.90	...	.....	.....	.....	.....	.....	.....

MARCH 1904

Date	Footnote	Local Datum			Sea-level Datum			Footnote	Local Datum			Sea-level Datum		
		Above Dam	Lake	Tail Water	Above Dam	Lake	Water Tail		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1	*	99.30	99.75	78.75	1059.30	1059.75	1038.75	*	c 98.00	99.50	78.50	.....	1059.50	1038.50
2	...	99.30	99.75	78.75	59.30	59.75	38.75	...	c 98.00	99.50	78.50	.....	59.50	38.50
3	...	99.30	99.75	78.75	59.30	59.75	38.75	...	c 98.00	99.50	78.50	.....	59.50	38.50
4	...	99.30	99.75	78.75	59.30	59.75	38.75	...	c 98.00	99.50	78.50	.....	59.50	38.50
5	...	99.30	99.75	78.75	59.30	59.75	38.75	...	c 98.00	99.50	78.50	.....	59.50	38.50
6	...	99.30	99.75	78.75	59.30	59.75	38.75	...	c 98.00	99.50	78.50	.....	59.50	38.50
7	...	99.20	99.70	78.70	59.20	59.70	38.70	...	c 98.00	99.50	78.50	.....	59.50	38.50
8	...	99.20	99.70	78.70	59.20	59.70	38.70	...	c 98.00	99.50	78.50	.....	59.50	38.50
9	...	99.20	99.70	78.70	59.20	59.70	38.70	...	c 98.00	99.50	78.50	.....	59.50	38.50
10	...	99.20	99.70	78.70	59.20	59.70	38.70	...	c 98.00	99.50	78.50	.....	59.50	38.50
11	...	99.20	99.70	78.70	59.20	59.70	38.70	...	c 98.00	99.50	78.50	.....	59.50	38.50
12	...	99.20	99.70	78.70	59.20	59.70	38.70	...	c 98.00	99.50	78.50	.....	59.50	38.50
13	...	99.20	99.70	78.70	59.20	59.70	38.70	...	c 98.00	99.50	78.50	.....	59.50	38.50
14	...	99.20	99.70	78.70	59.20	59.70	38.70	...	c 98.00	99.50	78.50	.....	59.50	38.50
15	...	99.20	99.70	78.70	59.20	59.70	38.70	...	c 98.00	99.50	78.50	.....	59.50	38.50
16	...	99.20	99.70	78.70	59.20	59.70	38.70	...	c 98.10	99.60	78.60	.....	59.60	38.60
17	...	99.20	99.70	78.70	59.20	59.70	38.70	...	c 98.10	99.60	78.60	.....	59.60	38.60
18	...	99.20	99.70	78.70	59.20	59.70	38.70	...	c 98.10	99.60	78.60	.....	59.60	38.60
19	...	99.20	99.70	78.70	59.20	59.70	38.70	...	c 98.10	99.60	78.60	.....	59.60	38.60
20	...	99.20	99.70	78.70	59.20	59.70	38.70	...	c 98.10	99.60	78.60	.....	59.60	38.60
21	...	99.10	99.60	78.60	59.10	59.60	38.60	...	c 98.20	99.70	78.75	.....	59.70	38.75
22	...	99.10	99.60	78.60	59.10	59.60	38.60	...	c 98.20	99.70	78.75	.....	59.70	38.75
23	...	99.10	99.60	78.60	59.10	59.60	38.60	1	c 98.20	99.70	78.75	.....	59.70	38.75
24	...	99.10	99.60	78.60	59.10	59.60	38.60	...	c 98.20	99.70	78.75	.....	59.70	38.75
25	...	99.10	99.60	78.60	59.10	59.60	38.60	...	c 98.20	99.70	78.75	.....	59.70	38.75
26	...	99.10	99.60	78.60	59.10	59.60	38.60	...	c 98.30	99.75	78.75	.....	59.75	38.75
27	...	99.10	99.60	78.60	59.10	59.60	38.60	...	c 98.30	99.75	78.80	.....	59.75	38.80
28	...	99.10	99.60	78.60	59.10	59.60	38.60	...	c 98.30	99.75	78.80	.....	59.75	38.80
29	...	99.10	99.60	78.60	59.10	59.60	38.60	...	c 98.30	99.75	78.80	.....	59.75	38.80
30	...	99.10	99.60	78.60	59.10	59.60	38.60	...	c 98.30	99.75	78.80	.....	59.75	38.80
31	...	99.10	99.60	78.60	59.10	59.60	38.60	...	.....	.....	.....	.....	.....	.....

* Records of Napoleon Lemay. See introductory comments. (Engrs.)

1. Rain; ferry arrived from Keewatin. (M.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

MAY 1904

Date	Footnote	Local Datum			Sea-level Datum			Footnote	Local Datum			Sea-level Datum		
		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1	*	c 98.40	99.80	78.85	.....	1059.80	1038.85	*	99.90	a 100.00	80.10	1059.90	1060.00	1040.10
2	...	c 98.40	99.80	78.85	.....	59.80	38.85	..	99.90	a 100.00	80.10	59.90	60.00	40.10
3	...	c 98.40	99.80	78.85	.....	59.80	38.85	..	99.90	a 100.00	80.10	59.90	60.00	40.10
4	...	c 98.40	99.80	78.85	.....	59.80	38.85	..	99.90	a 100.00	80.10	59.90	60.00	40.10
5	...	c 98.40	99.80	78.85	.....	59.80	38.85	..	99.90	a 100.00	80.10	59.90	60.00	40.10
6	...	c 98.40	99.80	78.85	.....	59.80	38.85	..	99.90	a 100.00	80.15	59.90	60.00	40.15
7	...	c 98.40	99.80	78.90	.....	59.80	38.90	..	99.95	a 100.00	80.15	59.95	60.00	40.15
8	...	c 98.50	99.90	78.90	.....	59.90	38.90	..	99.95	a 100.00	80.15	59.95	60.00	40.15
9	...	c 98.50	99.90	78.90	.....	59.90	38.90	..	99.95	a 100.00	80.15	59.95	60.00	40.15
10	...	c 98.50	99.90	78.90	.....	59.90	38.90	..	99.95	a 100.00	80.15	59.95	60.00	40.15
11	...	c 98.50	99.90	78.90	.....	59.90	38.90	..	99.95	a 100.00	80.15	59.95	60.00	40.15
12	...	c 98.50	99.90	78.90	.....	59.90	38.90	..	99.95	a 100.00	80.15	59.95	60.00	40.15
13	...	c 98.50	99.90	79.95	.....	59.90	39.95	..	99.95	a 100.00	80.15	59.95	60.00	40.15
14	...	c 98.60	99.95	79.95	.....	59.95	39.95	..	99.95	a 100.00	80.15	59.95	60.00	40.15
15	...	c 98.60	99.95	79.95	.....	59.95	39.95	..	99.95	a 100.00	80.15	59.95	60.00	40.15
16	...	c 98.60	99.95	79.95	.....	59.95	39.95	..	99.95	100.10	80.20	59.95	60.10	40.20
17	...	c 98.60	99.95	a 80.00	.....	59.95	40.00	..	99.95	100.10	80.20	59.95	60.10	40.20
18	...	c 98.60	99.95	a 80.00	.....	59.95	40.00	..	99.95	100.10	80.20	59.95	60.10	40.20
19	...	c 98.60	99.95	a 80.00	.....	59.95	40.00	..	99.95	100.10	80.20	59.95	60.10	40.20
20	...	c 98.60	99.95	a 80.00	.....	59.95	40.00	..	99.95	100.20	80.20	59.95	60.20	40.20
21	...	c 98.70	99.95	a 80.00	.....	59.95	40.00	..	99.95	100.20	80.20	59.95	60.20	40.20
22	...	c 98.70	99.95	a 80.00	.....	59.95	40.00	..	99.95	100.20	80.20	59.95	60.20	40.20
23	...	c 98.70	c 99.00	a 80.00	.....	.....	40.00	..	99.95	100.20	80.20	59.95	60.20	40.20
24	...	c 98.70	c 99.00	80.10	.....	.....	40.10	..	99.95	100.30	80.20	59.95	60.30	40.20
25	...	c 98.70	c 99.00	80.10	.....	.....	40.10	..	a 100.00	100.30	80.20	60.00	60.30	40.20
26	...	c 98.70	c 99.00	80.10	.....	.....	40.10	..	a 100.00	100.30	80.30	60.00	60.30	40.30
27	...	c 98.70	c 99.00	80.10	.....	.....	40.10	..	a 100.00	100.30	80.30	60.00	60.30	40.30
28	...	c 98.80	c 99.00	80.10	.....	.....	40.10	..	a 100.00	100.30	80.30	60.00	60.30	40.30
29	...	c 98.80	c 99.00	80.10	.....	.....	40.10	..	a 100.00	100.40	80.30	60.00	60.40	40.30
30	...	c 98.80	c 99.00	80.10	.....	.....	40.10	..	a 100.00	100.40	80.30	60.00	60.40	40.30
31	...	c 99.80	c 99.00	80.10	.....	.....	40.10	..	.....	.....	.....	.....	.....	.....

JULY 1904

1	*	a 100.00	100.40	80.30	1060.00	1060.40	1040.30	*	a 100.00	100.30	80.20	1060.00	1060.30	1040.20
2	...	a 100.00	100.40	80.30	60.00	60.40	40.30	..	a 100.00	100.30	80.20	60.00	60.30	40.20
3	...	a 100.00	100.50	80.40	60.00	60.50	40.40	2	a 100.00	100.40	80.30	60.00	60.40	40.30
4	...	a 100.00	100.50	80.40	60.00	60.50	40.40	..	a 100.00	100.40	80.30	60.00	60.40	40.30
5	...	100.10	100.50	80.40	60.10	60.50	40.40	..	a 100.00	100.40	80.30	60.00	60.40	40.30
6	...	100.10	100.50	80.40	60.10	60.50	40.40	..	a 100.00	100.40	80.30	60.00	60.40	40.30
7	...	100.10	100.60	80.40	60.10	60.60	40.40	..	a 100.00	100.50	80.30	60.00	60.50	40.30
8	...	100.10	100.60	80.50	60.10	60.60	40.50	..	a 100.00	100.50	80.40	60.00	60.50	40.40
9	...	100.10	100.60	80.50	60.10	60.60	40.50	..	a 100.00	100.50	80.40	60.00	60.50	40.40
10	...	100.10	100.60	80.50	60.10	60.60	40.50	..	a 100.00	100.50	80.40	60.00	60.50	40.40
11	...	100.15	100.70	80.50	60.15	60.70	40.50	..	b 100.05	100.60	80.40	60.05	60.60	40.40
12	...	100.15	100.70	80.50	60.15	60.70	40.50	..	b 100.05	100.60	80.40	60.05	60.60	40.40
13	...	100.15	100.70	80.50	60.15	60.70	40.50	..	b 100.05	100.60	80.40	60.05	60.60	40.40
14	...	100.15	100.70	80.60	60.15	60.70	40.60	..	b 100.05	100.60	80.50	60.05	60.60	40.50
15	...	100.20	100.80	80.60	60.20	60.80	40.60	..	100.10	100.70	80.50	60.10	60.70	40.50
16	...	a 100.00	100.40	80.30	60.00	60.40	40.30	..	100.30	100.90	80.40	60.30	60.90	40.40
17	...	a 100.00	100.40	80.30	60.00	60.40	40.30	..	100.30	100.90	80.40	60.30	60.90	40.40
18	...	a 100.00	100.50	80.40	60.00	60.50	40.40	..	100.30	100.90	80.40	60.30	60.90	40.40
19	...	a 100.00	100.50	80.40	60.00	60.50	40.40	..	100.30	100.90	80.40	60.30	60.90	40.40
20	...	100.10	100.50	80.40	60.10	60.50	40.40	..	100.20	100.80	80.30	60.20	60.80	40.30
21	...	100.10	100.50	80.40	60.10	60.50	40.40	..	100.20	100.80	80.30	60.20	60.80	40.30
22	...	100.10	100.60	80.40	60.10	60.60	40.40	..	100.20	100.80	80.30	60.20	60.80	40.30
23	...	100.10	100.60	80.50	60.10	60.60	40.50	..	100.20	100.80	80.30	60.20	60.80	40.30
24	...	100.10	100.60	80.50	60.10	60.60	40.50	..	100.20	100.80	80.30	60.20	60.80	40.30
25	...	100.10	100.60	80.50	60.10	60.60	40.50	..	100.20	100.80	80.30	60.20	60.80	40.30
26	...	100.15	100.70	80.50	60.15	60.70	40.50	..	100.20	100.80	80.20	60.20	60.80	40.20
27	...	100.15	100.70	80.50	60.15	60.70	40.50	..	100.10	100.80	80.20	60.10	60.80	40.20
28	...	100.15	100.70	80.50	60.15	60.70	40.50	..	100.10	100.70	80.20	60.10	60.70	40.20
29	...	100.15	100.70	80.60	60.15	60.70	40.60	..	100.10	100.70	80.20	60.10	60.70	40.20
30	1	100.20	100.80	80.60	60.20	60.80	40.60	..	100.10	100.70	80.20	60.10	60.70	40.20
31	...	.....	.....	.....	.....	.....	.....	..	.....	.....	.....	.....	.....	.....

* Records of Napoleon Lemay. See introductory comments. (Engrs.)

1. High wind all day. (M.)

2. Gale southeast, severe lightning. (M.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	Footnote	SEPTEMBER 1904 Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water	Footnote	OCTOBER Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water
1	*	c 99.00	100.60	80.20	.....	1060.60	1040.20	*	99.90	100.50	79.90	1059.90	1060.50	1039.90
2	...	c 99.00	100.60	80.20	.....	60.60	40.20	...	99.80	100.50	79.90	59.80	60.50	39.90
3	...	c 99.00	100.60	80.20	.....	60.60	40.20	...	99.80	100.40	79.80	59.80	60.40	39.80
4	...	c 99.00	100.60	80.10	.....	60.60	40.10	...	99.80	100.40	79.80	59.80	60.40	39.80
5	...	c 99.00	100.60	80.10	.....	60.60	40.10	...	99.80	100.40	79.80	59.80	60.40	39.80
6	...	c 99.00	100.60	80.10	.....	60.60	40.10	...	99.80	100.40	79.80	59.80	60.40	39.80
7	...	99.95	100.55	c 79.00	1059.95	60.55	.....	...	99.80	100.40	79.80	59.80	60.40	39.80
8	...	99.95	100.55	c 79.00	59.95	60.55	.....	...	99.70	100.30	79.80	59.70	60.30	39.80
9	...	99.95	100.55	c 79.00	59.95	60.55	.....	...	99.70	100.30	79.70	59.70	60.30	39.70
10	...	99.95	100.55	c 79.00	59.95	60.55	.....	...	99.70	100.30	79.70	59.70	60.30	39.70
11	...	99.95	100.55	c 79.00	59.95	60.55	.....	...	99.70	100.30	79.70	59.70	60.30	39.70
12	...	99.95	100.55	c 79.00	59.95	60.55	.....	...	99.70	100.30	79.70	59.70	60.30	39.70
13	...	99.90	100.50	79.90	59.90	60.50	39.90	...	99.70	100.30	79.70	59.70	60.30	39.70
14	...	99.90	100.50	79.90	59.90	60.50	39.90	...	99.60	100.20	79.70	59.60	60.20	39.70
15	...	99.90	100.50	79.90	59.90	60.50	39.90	...	99.60	100.20	79.60	59.60	60.20	39.60
16	...	99.90	100.50	79.90	59.90	60.50	39.90	...	99.60	100.20	79.60	59.60	60.20	39.60
17	...	99.90	100.50	79.90	59.90	60.50	39.90	...	99.50	100.10	79.50	59.50	60.10	39.50
18	...	99.90	100.50	79.90	59.90	60.50	39.90	...	99.50	100.10	79.50	59.50	60.10	39.50
19	...	99.90	100.50	79.90	59.90	60.50	39.90	...	99.50	100.10	79.50	59.50	60.10	39.50
20	...	99.90	100.50	79.90	59.90	60.50	39.90	...	99.40	a 100.00	79.50	59.40	60.00	39.50
21	...	99.90	100.50	79.90	59.90	60.50	39.90	...	99.40	a 100.00	79.50	59.40	60.00	39.50
22	...	99.90	100.50	79.90	59.90	60.50	39.90	...	99.40	a 100.00	79.40	59.40	60.00	39.40
23	...	c 99.00	100.50	c 79.00	.....	60.50	.....	...	99.40	a 100.00	79.40	59.40	60.00	39.40
24	...	c 99.00	100.50	c 79.00	.....	60.50	.....	...	99.40	a 100.00	79.40	59.40	60.00	39.40
25	...	c 99.00	100.60	c 79.00	.....	60.60	.....	...	99.30	99.90	79.40	59.30	59.90	39.40
26	...	c 99.00	100.60	c 79.00	.....	60.60	.....	...	99.30	99.90	79.30	59.30	59.90	39.30
27	...	c 99.00	100.60	c 79.00	.....	60.60	.....	...	99.30	99.90	79.30	59.30	59.90	39.30
28	...	c 99.00	100.60	c 79.00	.....	60.60	.....	...	99.30	99.90	79.30	59.30	59.90	39.30
29	...	c 99.00	100.60	c 79.00	.....	60.60	.....	...	99.20	99.90	79.30	59.20	59.90	39.20
30	...	c 99.00	100.60	c 79.00	.....	60.60	.....	...	99.20	99.90	79.20	59.20	59.90	39.20
31	...	.....	.....	.....	.....	.....	.....	...	99.20	99.90	79.20	59.20	59.90	39.20

Date	Footnote	NOVEMBER 1904 Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water	Footnote	DECEMBER Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water
1	*	a 98.00	99.90	a 80.00	1058.00	1059.90	1040.00	*	98.75	99.60	78.70	1058.75	1059.60	1038.70
2	...	a 98.00	99.90	a 80.00	58.00	59.90	40.00	...	98.75	99.60	78.70	58.75	59.60	38.70
3	...	a 98.00	99.90	a 80.00	58.00	59.90	40.00	...	98.75	99.60	78.55	58.75	59.60	38.55
4	...	a 98.00	99.90	a 81.00	58.00	59.90	41.00	...	98.75	99.60	78.55	58.75	59.60	38.55
5	...	a 98.00	99.90	a 81.00	58.00	59.90	41.00	...	98.70	99.60	78.55	58.70	59.60	38.55
6	...	a 97.00	99.90	a 81.00	57.00	59.90	41.00	...	98.70	99.60	78.55	58.70	59.60	38.55
7	...	a 97.00	99.90	a 81.00	57.00	59.90	41.00	...	98.70	99.55	78.55	58.70	59.55	38.55
8	...	a 97.00	99.80	a 82.00	57.00	59.80	42.00	...	98.70	99.55	78.55	58.70	59.55	38.55
9	...	a 97.00	99.80	a 82.00	57.00	59.80	42.00	...	98.70	99.55	78.50	58.70	59.55	38.50
10	...	a 97.00	99.80	a 82.00	57.00	59.80	42.00	...	98.60	99.55	78.50	58.60	59.55	38.50
11	...	a 97.00	99.80	a 82.00	57.00	59.80	42.00	...	98.60	99.55	78.50	58.60	59.55	38.50
12	...	a 97.00	99.80	a 82.00	57.00	59.80	42.00	...	98.60	99.55	78.50	58.60	59.55	38.50
13	...	a 97.00	99.80	a 82.00	57.00	59.80	42.00	...	98.60	99.50	78.50	58.60	59.50	38.50
14	...	c 99.90	99.80	a 82.00	.....	59.80	42.00	...	98.60	99.50	78.50	58.60	59.50	38.50
15	...	c 99.90	99.75	a 82.00	.....	59.75	42.00	...	98.60	99.50	78.50	58.60	59.50	38.50
16	...	a 99.00	99.70	78.90	59.00	59.70	38.90	...	98.60	99.50	78.50	58.60	59.50	38.50
17	...	a 99.00	99.70	78.90	59.00	59.70	38.90	...	98.75	99.60	78.70	58.75	59.60	38.70
18	...	98.90	99.70	78.90	58.90	59.70	38.90	...	98.75	99.60	78.70	58.75	59.60	38.70
19	...	98.90	99.70	78.80	58.90	59.70	38.80	...	98.75	99.60	78.55	58.75	59.60	38.55
20	...	98.80	99.70	78.80	58.80	59.70	38.80	...	98.75	99.60	78.55	58.75	59.60	38.55
21	...	98.80	99.70	78.80	58.80	59.70	38.80	...	98.70	99.60	78.55	58.70	59.60	38.55
22	...	98.80	99.70	78.80	58.80	59.70	38.80	...	98.70	99.60	78.55	58.70	59.60	38.55
23	...	98.80	99.70	78.80	58.80	59.70	38.80	...	98.70	99.55	78.55	58.70	59.55	38.55
24	...	98.80	99.70	78.80	58.80	59.70	38.80	...	98.70	99.55	78.50	58.70	59.55	38.50
25	...	98.80	99.70	78.80	58.80	59.70	38.80	...	98.70	99.55	78.50	58.70	59.55	38.50
26	...	98.79	99.69	78.70	58.79	59.69	38.70	...	98.60	99.55	78.50	58.60	59.55	38.50
27	...	98.79	99.69	78.70	58.79	59.69	38.70	...	98.60	99.55	78.50	58.60	59.55	38.50
28	...	98.79	99.69	78.70	58.79	59.69	38.70	...	98.60	99.55	78.50	58.60	59.55	38.50
29	1	98.79	99.69	78.70	58.79	59.69	38.70	...	98.60	99.50	78.50	58.60	59.50	38.50
30	2	98.79	99.69	78.70	58.79	59.69	38.70	...	98.60	99.50	78.50	58.60	59.50	38.50
31	...	.....	.....	.....	.....	.....	.....	...	98.60	99.50	78.50	58.60	59.50	38.50

* Records of Napoleon Lemay. See introductory comments. (Engrs.)

1. Snow; good sleighing. (M.)

2. Snow; last trip ferry 9 p. m. (M.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	JANUARY 1905							FEBRUARY						
	Footnote	Local Datum			Sea-level Datum			Footnote	Local Datum			Sea-level Datum		
		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1	*	98.50	99.40	78.40	1058.50	1059.40	1038.40	*	98.30	99.20	78.10	1058.30	1059.20	1038.10
2	...	98.50	99.40	78.40	58.50	59.40	38.40	...	98.30	99.20	78.10	58.30	59.20	38.10
3	...	98.50	99.40	78.40	58.50	59.40	38.40	...	98.30	99.20	78.10	58.30	59.20	38.10
4	...	98.50	99.40	78.40	58.50	59.40	38.40	...	98.30	99.20	78.10	58.30	59.20	38.10
5	...	98.50	99.40	78.40	58.50	59.40	38.40	...	98.30	99.20	78.10	58.30	59.20	38.10
6	...	98.40	99.30	78.30	58.40	59.30	38.30	1	98.30	99.20	78.10	58.30	59.20	38.10
7	...	98.40	99.30	78.30	58.40	59.30	38.30	...	98.20	99.10	78.10	58.20	59.10	38.10
8	...	98.40	99.30	78.30	58.40	59.30	38.30	...	98.20	99.10	78.10	58.20	59.10	38.10
9	...	98.40	99.30	78.20	58.40	59.30	38.20	...	98.20	99.10	78.10	58.20	59.10	38.10
10	...	98.30	99.30	78.20	58.30	59.30	38.20	...	98.20	99.10	78.10	58.20	59.10	38.10
11	...	98.30	99.20	78.20	58.30	59.20	38.20	...	98.20	c 98.10	c 77.10	58.20	.....	.....
12	...	98.30	99.20	78.20	58.30	59.20	38.20	...	98.20	c 98.10	c 77.10	58.20	.....	.....
13	...	98.30	99.20	78.20	58.30	59.20	38.20	...	98.10	c 98.10	c 77.10	58.10	.....	.....
14	...	98.30	99.20	78.20	58.30	59.20	38.20	...	98.10	c 98.10	c 77.10	58.10	.....	.....
15	...	98.30	99.20	78.20	58.30	59.20	38.20	...	98.10	c 98.10	c 77.10	58.10	.....	.....
16	...	98.30	99.20	78.20	58.30	59.20	38.20	2	97.90	98.90	77.90	57.90	58.90	37.90
17	...	98.30	99.20	78.20	58.30	59.20	38.20	...	97.90	98.90	77.90	57.90	58.90	37.90
18	...	98.30	99.20	78.20	58.30	59.20	38.20	d	97.90	98.90	77.90	57.90	58.90	37.90
19	...	98.50	99.40	78.40	58.50	59.40	38.40	...	97.90	98.90	77.90	57.90	58.90	37.90
20	...	98.50	99.40	78.40	58.50	59.40	38.40	...	97.90	98.90	77.90	57.90	58.90	37.90
21	...	98.50	99.40	78.40	58.50	59.40	38.40	...	97.90	98.90	77.90	57.90	58.90	37.90
22	...	98.50	99.40	78.40	58.50	59.40	38.40	...	97.90	98.90	77.90	57.90	58.90	37.90
23	...	98.40	99.30	78.30	58.40	59.30	38.30	...	97.90	98.90	77.90	57.90	58.90	37.90
24	...	98.40	99.30	78.30	58.40	59.30	38.30	...	97.90	98.90	77.90	57.90	58.90	37.90
25	...	98.40	99.30	78.30	58.40	59.30	38.30	...	97.90	98.90	77.90	57.90	58.90	37.90
26	...	98.40	99.30	78.20	58.40	59.30	38.20	...	97.90	98.90	77.90	57.90	58.90	37.90
27	...	98.30	99.20	78.20	58.30	59.20	38.20	...	97.90	98.90	77.90	57.90	58.90	37.90
28	...	98.30	99.20	78.20	58.30	59.20	38.20	...	97.90	98.90	77.90	57.90	58.90	37.90
29	...	98.30	99.20	78.20	58.30	59.20	38.20	...	.....	.....	.....	.....	.....	.....
30	...	98.30	99.20	78.20	58.30	59.20	38.20	...	.....	.....	.....	.....	.....	.....
31	...	98.30	99.20	78.20	58.30	59.20	38.20	...	.....	.....	.....	.....	.....	.....

Date	MARCH 1905							APRIL						
1	*	97.90	98.90	77.90	1057.90	1058.90	1037.90	...	In month of April an			.....	.....	.....
2	...	97.90	98.90	77.90	57.90	58.90	37.90	...	average height of—			.....	.....	.....
3	...	97.90	98.90	77.90	57.90	58.90	37.90	...	.....	.....	.....	.....	.....	.....
4	...	97.90	98.90	77.90	57.90	58.90	37.90	...	c 97.90	c 98.90	c 77.90	.....	.....	.....
5	...	97.90	98.90	77.90	57.90	58.90	37.90	...	.....	.....	.....	.....	.....	.....
6	...	97.90	98.90	77.90	57.90	58.90	37.90	...	.....	.....	.....	.....	.....	.....
7	...	97.90	98.90	77.90	57.90	58.90	37.90	...	.....	.....	.....	.....	.....	.....
8	...	97.90	98.90	77.90	57.90	58.90	37.90	...	.....	.....	.....	.....	.....	.....
9	...	97.90	98.90	77.90	57.90	58.90	37.90	...	.....	.....	.....	.....	.....	.....
10	...	97.90	98.90	77.90	57.90	58.90	37.90	...	.....	.....	.....	.....	.....	.....
11	...	97.90	98.90	77.90	57.90	58.90	37.90	...	.....	.....	.....	.....	.....	.....
12	...	97.90	98.90	77.90	57.90	58.90	37.90	...	.....	.....	.....	.....	.....	.....
13	...	97.90	98.90	77.90	57.90	58.90	37.90	...	.....	.....	.....	.....	.....	.....
14	...	97.90	98.90	77.90	57.90	58.90	37.90	4	.....	.....	.....	.....	.....	.....
15	...	97.90	98.90	77.90	57.90	58.90	37.90	...	.....	.....	.....	.....	.....	.....
16	...	97.90	98.90	77.90	57.90	58.90	37.90	...	.....	.....	.....	.....	.....	.....
17	...	97.90	98.90	77.90	57.90	58.90	37.90	...	.....	.....	.....	.....	.....	.....
18	...	97.90	98.90	77.90	57.90	58.90	37.90	...	.....	.....	.....	.....	.....	.....
19	...	97.90	98.90	77.90	57.90	58.90	37.90	...	.....	.....	.....	.....	.....	.....
20	...	97.90	98.90	77.90	57.90	58.90	37.90	5	.....	.....	.....	.....	.....	.....
21	...	97.90	98.90	77.90	57.90	58.90	37.90	...	.....	.....	.....	.....	.....	.....
22	...	97.90	98.90	77.90	57.90	58.90	37.90	...	.....	.....	.....	.....	.....	.....
23	...	97.90	98.90	77.90	57.90	58.90	37.90	...	.....	.....	.....	.....	.....	.....
24	...	97.90	98.90	77.90	57.90	58.90	37.90	...	.....	.....	.....	.....	.....	.....
25	...	97.90	98.90	77.90	57.90	58.90	37.90	...	.....	.....	.....	.....	.....	.....
26	...	97.90	98.90	77.90	57.90	58.90	37.90	...	.....	.....	.....	.....	.....	.....
27	3	97.90	98.90	77.90	57.90	58.90	37.90	...	.....	.....	.....	.....	.....	.....
28	...	97.80	98.90	77.90	57.90	58.90	37.90	...	.....	.....	.....	.....	.....	.....
29	...	97.90	98.90	77.90	57.90	58.90	37.90	...	.....	.....	.....	.....	.....	.....
30	...	97.90	98.90	77.90	57.90	58.90	37.90	...	.....	.....	.....	.....	.....	.....
31	...	97.90	98.90	77.90	57.90	58.90	37.90	...	.....	.....	.....	.....	.....	.....

* Records of Napoleon Lemay. See introductory comments. (Engrs.)

1. Above Dam, in record book entered 18.30, etc., interpreted as 98.30, etc., on basis of gauge heights preceding and following this period. (Feb. 6-15.) (Engrs.) 2. That's the best we can do on account of frost. I can not see the gauge. (Feb. 16-28.) (S.) 3. Lake beginning to open. (M.) 4. Nils Hansen was appointed caretaker at Norman Dam, Apr. 14, 1905, to date from Apr. 12, 1905. Hansen was still acting in this capacity on Jan. 1st, 1915. (Engrs.) 5. Ferry started running. (M.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	Footnote	May 1905 Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water	Footnote	June 1905 Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water
1	1	c 98.00	c 99.10	c 78.00				..	98.40	99.60	a 80.00	1058.40	1059.60	1040.00
2	2	c 98.00	c 99.10	c 78.00				..	98.40	99.60	a 80.00	58.40	59.60	40.00
3	..	c 98.00	c 99.10	c 78.00				..	98.45	99.70	a 80.00	58.45	59.70	40.00
4	..	c 98.00	c 99.10	c 78.00				..	98.45	99.70	a 80.00	58.45	59.70	40.00
5	..	c 98.00	c 99.10	c 78.00				..	98.45	99.70	a 80.00	58.45	59.70	40.00
6	..	c 98.00	c 99.10	c 78.00				..	98.55	99.70	80.10	58.55	59.70	40.10
7	..	c 98.00	c 99.10	c 78.00				..	98.55	99.70	80.10	58.55	59.70	40.10
8	3	c 98.00	c 99.10	c 78.00				..	98.55	99.70	80.10	58.55	59.70	40.10
9	4	c 98.00	c 99.10	c 78.00				..	98.70	99.70	80.10	58.70	59.70	40.10
10	5	c 98.00	c 99.10	c 78.00				..	98.70	99.70	80.10	58.70	59.70	40.10
11	..							..			80.10			40.10
12	..	c 98.00	c 99.10	c 78.00				..	98.80	99.75	80.10	58.80	59.75	40.10
13	..	c 98.00	c 99.10	c 78.00				..	98.80	99.75	80.10	58.80	59.75	40.10
14	..	c 98.00	c 99.10	c 78.00				6	98.80	99.75	80.10	58.80	59.75	40.10
15	..	c 98.00	c 99.10	c 78.00				..	98.95	99.75	80.10	58.95	59.75	40.10
16	..	98.20	99.50	79.90	1058.20	1059.50	1039.90	..	99.10	99.85	80.10	59.10	59.85	40.10
17	..	98.20	99.50	79.90	58.20	59.50	39.90	..	99.20	99.90	80.15	59.20	59.90	40.15
18	..	98.20	99.50	79.90	58.20	59.50	39.90	..	99.30	99.95	80.15	59.30	59.95	40.15
19	..	98.20	99.50	79.90	58.20	59.50	39.90	..	99.40	a 100.00	80.20	59.40	60.00	40.20
20	..	98.20	99.50	79.90	58.20	59.50	39.90	..	99.45	a 100.00	80.20	59.45	60.00	40.20
21	..	98.20	99.50	79.90	58.20	59.50	39.90	..	99.55	100.10	80.20	59.55	60.10	40.20
22	..	98.20	99.50	79.90	58.20	59.50	39.90	..	99.60	100.10	80.20	59.60	60.10	40.20
23	..	98.20	99.50	79.90	58.20	59.50	39.90	..	99.75	100.15	80.20	59.75	60.15	40.20
24	..	98.20	99.50	79.90	58.20	59.50	39.90	..	99.80	100.20	80.20	59.80	60.20	40.20
25	d	98.20	99.50	79.90	58.20	59.50	39.90	..	99.80	100.30	80.20	59.80	60.30	40.20
26	..	98.20	99.50	79.90	58.20	59.50	39.90	..	99.85	100.40	80.20	59.85	60.40	40.20
27	..	98.20	99.50	79.90	58.20	59.50	39.90	..	99.95	100.45	80.20	59.95	60.45	40.20
28	..	98.20	99.50	79.90	58.20	59.50	39.90	7	100.05	100.60	80.30	60.05	60.60	40.30
29	..	98.20	99.50	79.90	58.20	59.50	39.90	8	100.10	100.65	80.30	60.10	60.65	40.30
30	..	98.20	99.50	79.90	58.20	59.50	39.90	..	a 100.00	100.60	80.30	60.00	60.60	40.30
31	..	98.20	99.50	79.90	58.20	59.50	39.90	..						

Date	Footnote	July 1905 Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water	Footnote	August 1905 Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water
1	..	a 100.00	100.60	80.35	1060.00	1060.60	1040.35	..	97.80	101.30	85.20	1057.80	1061.30	1045.20
2	..	a 100.00	100.60	80.40	60.00	60.60	40.40	.. a	98.00	101.30	85.20	58.00	61.30	45.20
3	..	a 100.00	100.60	80.40	60.00	60.60	40.40	.. a	98.00	101.30	85.35	58.00	61.30	45.35
4	..	a 100.00	100.60	80.50	60.00	60.60	40.50	.. a	98.00	101.30	85.45	58.00	61.30	45.45
5	..	a 100.00	100.70	80.50	60.00	60.70	40.50	.. a	98.00	101.30	85.60	58.00	61.30	45.60
6	..	100.05	100.75	80.60	60.05	60.75	40.60	.. a	98.00	101.30	85.75	58.00	61.30	45.75
7	..	100.10	100.85	80.70	60.10	60.85	40.70	d	97.80	101.30	85.70	57.80	61.30	45.70
8	9	100.10	100.85	80.85	60.10	60.85	40.85	..	97.50	101.30	85.80	57.50	61.30	45.80
9	d	100.10	a 101.00	80.95	60.10	61.00	40.95	..	97.50	101.30	85.85	57.50	61.30	45.85
10	..	100.10	101.20	81.15	60.10	61.20	41.15	..	97.50	101.30	85.95	57.50	61.30	45.95
11	10	100.15	101.15	81.60	60.15	61.15	41.60	..	97.50	101.30	85.90	57.50	61.30	45.90
12	..	100.15	101.15	81.90	60.15	61.15	41.90	..	97.50	101.30	85.95	57.50	61.30	45.95
13	11	99.50	101.10	82.10	59.50	61.10	42.10	..	97.60	.....	86.10	57.60	.....	46.10
14	..	99.50	101.20	82.60	59.50	61.20	42.60	..	97.60	.....	86.20	57.60	.....	46.20
15	..	99.50	101.35	82.90	59.50	61.35	42.90	..	97.60	.....	86.20	57.60	.....	46.20
16	..	99.50	101.35	83.30	59.50	61.35	43.30	..	97.30	101.30	86.40	57.30	61.30	46.40
17	..	99.50	101.30	83.45	59.50	61.30	43.45	..	97.10	.....	86.40	57.10	.....	46.40
18	..	99.30	101.30	83.45	59.30	61.30	43.45	..	96.80	.....	86.40	56.80	.....	46.40
19	..	99.30	101.40	83.60	59.30	61.40	43.60	..	96.80	.....	86.40	56.80	.....	46.40
20	..	99.30	101.35	83.70	59.30	61.35	43.70	..	96.80	.....	86.40	56.80	.....	46.40
21	d	98.90	101.30	83.85	58.90	61.30	43.85	12	96.80	.....	86.40	56.80	.....	46.40
22	..	98.90	101.30	83.90	58.90	61.30	43.90	..	96.80	.....	86.50	56.80	.....	46.50
23	..	98.90	101.30	84.10	58.90	61.30	44.10	..	96.80	.....	86.50	56.80	.....	46.50
24	..	98.90	101.30	84.30	58.90	61.30	44.30	..	96.80	.....	86.40	56.80	.....	46.40
25	d	98.90	101.30	84.45	58.90	61.30	44.45	..	96.80	.....	86.40	56.80	.....	46.40
26	..	c 97.90	101.30	84.60	.....	61.30	44.60	..	96.80	.....	86.40	56.80	.....	46.40
27	..	97.80	101.30	84.75	57.80	61.30	44.75	..	96.80	.....	86.40	56.80	.....	46.40
28	..	97.80	101.30	84.85	57.80	61.30	44.85	..	96.80	.....	86.40	56.80	.....	46.40
29	..	97.70	101.30	85.00	57.70	61.30	45.00	..	96.80	.....	86.40	56.80	.....	46.40
30	..	97.60	101.30	85.00	57.60	61.30	45.00	..	96.80	.....	86.40	56.80	.....	46.40
31	..	97.60	101.30	85.10	57.60	61.30	45.10	..	96.80	.....	86.40	56.80	.....	46.40

1. Strong NE. wind. (M.) 2. Strong wind; blowing a gale all night. (M.) 3. Strong E. wind. (M.) 4. Strong E. wind. (M.) 5. High E. wind. (M.) 6. Very high SW. wind. (M.) 7. Thunder, heavy rain, high wind SE. (M.) Took out 12 logs on the 28th June, 1905. (R. B.) 8. Took out 12 logs June 29th. (S.) It is possible that notes 7 and 8 refer to the same operation. (Engrs.) 9. Took out 15 logs on the 8th of July, 1905. (R. B.) 10. Took out 15 logs on the 11th of July. (R. B.) 11. Took out 32 logs on the 13th. (R. B.) 12. Took out driftwood on 21st, 22d, and 26th. (S.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	Footnote	SEPTEMBER 1905 Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water	Footnote	OCTOBER Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water
1	d	96.80	.....	86.40	1056.80	.....	1046.40	2	98.40	102.80	85.20	1058.40	1062.80	1045.20
2	..	96.80	.....	86.50	56.80	.....	46.50	d	98.40	102.40	85.10	58.40	62.40	45.10
3	..	96.70	.....	86.50	56.70	.....	46.50	..	98.40	102.10	85.10	58.40	62.10	45.10
4	..	96.70	.....	86.50	56.70	.....	46.50	..	98.50	102.10	a 85.00	58.50	62.10	45.00
5	..	96.70	.....	86.40	56.70	.....	46.40	..	98.50	a 102.00	84.90	58.50	62.00	44.90
6	..	96.55	.....	86.40	56.55	.....	46.40	..	98.50	101.90	84.90	58.50	61.90	44.90
7	..	96.60	.....	86.50	56.60	.....	46.50	..	98.50	101.70	84.70	58.50	61.70	44.70
8	..	96.60	.....	86.30	56.60	.....	46.30	..	98.50	101.60	84.60	58.50	61.60	44.60
9	..	96.60	.....	86.30	56.60	.....	46.30	..	98.50	101.50	84.40	58.50	61.50	44.40
10	..	96.70	.....	86.30	56.70	.....	46.30	..	98.60	101.50	84.40	58.60	61.50	44.40
11	..	96.70	102.00	86.30	56.70	62.00	46.30	..	98.50	101.50	84.30	58.50	61.50	44.30
12	..	96.70	102.00	86.20	56.70	62.00	46.20	..	98.50	101.40	84.30	58.50	61.40	44.30
13	..	96.70	102.00	86.20	56.70	62.00	46.20	..	98.60	101.30	84.20	58.60	61.30	44.20
14	..	96.70	102.00	86.10	56.70	62.00	46.10	..	98.60	101.30	84.20	58.60	61.30	44.20
15	..	96.70	102.00	86.10	56.70	62.00	46.10	..	.....	.....	.....	.....	.....	.....
16	..	96.70	a 102.00	86.10	56.70	62.00	46.10	..	98.60	101.30	84.10	58.60	61.30	44.10
17	..	96.70	a 102.00	86.10	56.70	62.00	46.10	..	98.60	101.30	a 84.00	58.60	61.30	44.00
18	..	96.70	.....	a 86.00	56.70	.....	46.00	..	98.80	101.40	83.90	58.80	61.40	43.90
19	..	96.70	.....	a 86.00	56.70	.....	46.00	..	99.20	101.50	83.90	59.20	61.50	43.90
20	..	96.90	.....	85.90	56.90	.....	45.90	..	99.20	101.30	83.90	59.20	61.30	43.90
21	1	96.90	.....	85.80	56.90	.....	45.80	..	99.40	101.30	83.70	59.40	61.30	43.70
22	..	97.30	.....	85.80	57.30	.....	45.80	..	99.40	101.30	83.60	59.40	61.30	43.60
23	..	97.50	.....	85.60	57.50	.....	45.60	..	99.40	101.30	83.50	59.40	61.30	43.50
24	..	97.80	.....	85.50	57.80	.....	45.50	..	99.60	101.50	83.30	59.60	61.50	43.30
25	..	97.90	.....	85.40	57.90	.....	45.40	..	99.80	101.40	a 83.00	59.80	61.40	43.00
26	..	98.20	.....	85.40	58.20	.....	45.40	..	99.95	101.40	82.70	59.95	61.40	42.70
27	..	98.20	.....	85.30	58.20	.....	45.30	..	100.10	101.40	82.00	60.10	61.40	42.00
28	..	98.20	.....	85.40	58.20	.....	45.40	..	100.10	101.30	81.60	60.10	61.30	41.60
29	..	98.30	.....	85.40	58.30	.....	45.40	..	100.10	101.20	81.40	60.10	61.20	41.40
30	..	98.40	.....	85.25	58.40	.....	45.25	..	100.10	101.20	81.20	60.10	61.20	41.20
31	..	.....	.....	.....	.....	.....	.....	..	100.10	101.20	80.60	60.10	61.20	40.60

Date	Footnote	NOVEMBER 1905 Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water	Footnote	DECEMBER Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water
1	3	100.10	101.20	80.40	.....	.....	.....	6	a 100.00	100.60	78.90	1061.60	1061.70	1039.60
2	..	100.10	101.30	80.20	.....	.....	.....	..	a 100.00	100.60	78.90	61.60	61.70	39.60
3	..	100.10	101.10	80.10	.....	.....	.....	..	a 100.00	100.60	78.90	61.60	61.70	39.60
4	..	100.10	101.20	80.10	.....	.....	.....	..	a 100.00	100.60	78.90	61.60	61.70	39.60
5	..	b 100.05	101.20	a 80.00	.....	.....	.....	..	a 100.00	100.60	78.90	61.60	61.70	39.60
6	..	100.10	101.10	a 80.00	.....	.....	.....	..	a 100.00	100.60	78.80	61.60	61.70	39.50
7	..	100.10	a 101.00	a 80.00	.....	.....	.....	..	a 100.00	100.60	78.80	61.60	61.70	39.50
8	..	100.10	101.20	79.90	.....	.....	.....	..	a 100.00	100.60	78.80	61.60	61.70	39.50
9	..	100.10	101.10	79.90	.....	.....	.....	..	a 100.00	100.60	78.80	61.60	61.70	39.50
10	..	a 100.00	101.10	79.80	.....	.....	.....	..	a 100.00	100.60	78.80	61.60	61.70	39.50
11	..	a 100.00	101.10	79.70	.....	.....	.....	..	a 100.00	100.60	78.80	61.60	61.70	39.50
12	..	a 100.00	101.10	79.70	.....	.....	.....	..	a 100.00	100.60	78.80	61.60	61.70	39.50
13	..	a 100.00	101.20	79.50	.....	.....	.....	..	a 100.00	100.60	78.80	61.60	61.70	39.50
14	..	a 100.00	101.10	79.40	.....	.....	.....	..	a 100.00	100.60	78.80	61.60	61.70	39.50
15	..	a 100.00	101.10	79.30	.....	.....	.....	..	a 100.00	100.60	78.80	61.60	61.70	39.50
16	..	a 100.00	a 101.00	79.30	.....	.....	.....	..	100.00	100.60	78.80	61.60	61.70	39.50
17	..	a 100.00	a 101.00	79.20	.....	.....	.....	..	100.00	100.60	78.80	61.60	61.70	39.50
18	..	a 100.00	100.90	79.20	.....	.....	.....	..	100.00	100.60	78.80	61.60	61.70	39.50
19	..	a 100.00	100.90	79.20	.....	.....	.....	..	100.00	100.60	78.80	61.60	61.70	39.50
20	..	a 100.00	100.80	79.10	.....	.....	.....	..	100.00	100.60	78.80	61.60	61.70	39.50
21	..	a 100.00	100.80	79.10	.....	.....	.....	..	100.00	100.60	78.80	61.60	61.70	39.50
22	..	a 100.00	100.80	79.10	.....	.....	.....	..	100.00	100.60	78.80	61.60	61.70	39.50
23	..	a 100.00	100.80	79.10	.....	.....	.....	..	100.00	100.60	78.80	61.60	61.70	39.50
24	..	a 100.00	100.70	79.10	.....	.....	.....	..	100.00	100.60	78.80	61.60	61.70	39.50
25	..	a 100.00	100.70	a 79.00	.....	.....	.....	..	100.00	100.60	78.80	61.60	61.70	39.50
26	..	a 100.00	100.70	a 79.00	.....	.....	.....	..	100.00	100.60	78.80	61.60	61.70	39.50
27	..	a 100.00	100.70	a 79.00	.....	.....	.....	..	100.00	100.60	78.80	61.60	61.70	39.50
28	4	a 100.00	100.60	a 79.00	.....	.....	.....	..	100.00	100.60	78.80	61.60	61.70	39.50
29	5	a 100.00	100.60	a 79.00	.....	.....	.....	..	100.00	100.60	78.80	61.60	61.70	39.50
30	..	a 100.00	100.60	78.90	.....	.....	.....	..	100.00	100.60	78.80	61.60	61.70	39.50
31	..	.....	.....	.....	.....	.....	.....	..	100.00	100.60	78.80	61.60	61.70	39.50

1. Put in 50 logs on the 21st., 22nd., 23rd; as you can see by the report it lowered tail water. Water stands on the same level at Norman. (R. B.) (S.) 2. Very stormy, high SW. wind. (M.) 3. During November, 1905, the lake gauge was evidently moved to Keewatin from Norman and the above dam and tail-water gauges reset. Since the exact date of change is unknown the reductions to sea-level datum for the entire month have been omitted. See description of gauges, etc., page 124. (Engrs.) 4. Snowing, blowing a gale all day. (M.) 5. Bay frozen over solid this morning. (M.) 6. Lake gauge at Keewatin from November, 1905. (Engrs.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

JANUARY 1906 FEBRUARY

Date	Footnote	Local Datum			Sea-level Datum			Footnote	Local Datum			Sea-level Datum		
		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1		a100.00	100.60	78.80	1061.60	1061.70	1039.50		99.80	100.50	78.80	1061.40	1061.60	1039.50
2		a100.00	100.60	78.80	61.60	61.70	39.50		99.80	100.50	78.80	61.40	61.60	39.50
3		a100.00	100.60	78.80	61.60	61.70	39.50		99.80	100.50	78.80	61.40	61.60	39.50
4		a100.00	100.60	78.80	61.60	61.70	39.50		99.80	100.50	78.80	61.40	61.60	39.50
5		a100.00	100.60	78.80	61.60	61.70	39.50		99.80	100.50	78.80	61.40	61.60	39.50
6	1	a100.00	100.60	78.80	61.60	61.70	39.50		99.80	100.50	78.80	61.40	61.60	39.50
7		99.90	100.60	78.80	61.50	61.70	39.50		99.80	100.50	78.80	61.40	61.60	39.50
8		99.90	100.60	78.80	61.50	61.70	39.50		99.80	100.45	78.80	61.40	61.55	39.50
9		99.85	100.60	78.80	61.45	61.70	39.50		99.80	100.45	78.80	61.40	61.55	39.50
10		99.85	100.60	78.80	61.45	61.70	39.50		99.80	100.45	78.80	61.40	61.55	39.50
11		99.85	100.55	78.80	61.45	61.65	39.50		99.80	100.45	78.80	61.40	61.55	39.50
12		99.85	100.55	78.80	61.45	61.65	39.50		99.75	100.45	78.80	61.35	61.55	39.50
13		99.85	100.55	78.80	61.45	61.65	39.50		99.75	100.40	78.80	61.35	61.50	39.50
14		99.85	100.50	78.80	61.45	61.60	39.50		99.75	100.40	78.80	61.35	61.50	39.50
15		99.85	100.50	78.80	61.45	61.60	39.50		99.75	100.40	78.80	61.35	61.50	39.50
16		99.85	100.50	78.80	61.45	61.60	39.50		99.75	100.40	78.80	61.35	61.50	39.50
17		99.85	100.50	78.80	61.45	61.60	39.50	2	99.75	100.40	78.80	61.35	61.50	39.50
18		99.85	100.50	78.80	61.45	61.60	39.50		99.70	100.40	78.70	61.30	61.50	39.40
19		99.80	100.50	78.80	61.40	61.60	39.50		99.70	100.35	78.70	61.30	61.45	39.40
20		99.80	100.50	78.80	61.40	61.60	39.50		99.65	100.35	78.70	61.25	61.45	39.40
21									99.60	100.30	78.65	61.20	61.40	39.35
22		99.80	100.50	78.80	61.40	61.60	39.50		99.60	100.30	78.65	61.20	61.40	39.35
23		99.80	100.50	78.80	61.40	61.60	39.50	3	99.60	100.30	78.60	61.20	61.40	39.30
24		99.80	100.50	78.80	61.40	61.60	39.50		99.50	100.20	78.55	61.10	61.30	39.25
25		99.80	100.50	78.80	61.40	61.60	39.50		99.50	100.20	78.60	61.10	61.30	39.30
26		99.80	100.50	78.80	61.40	61.60	39.50		99.40	100.20	78.65	61.00	61.30	39.35
27		99.80	100.50	78.80	61.40	61.60	39.50		99.30	100.10	78.65	60.90	61.20	39.35
28		99.80	100.50	78.80	61.40	61.60	39.50		99.30	100.10	78.60	60.90	61.20	39.30
29		99.80	100.50	78.80	61.40	61.60	39.50							
30		99.80	100.50	78.80	61.40	61.60	39.50							
31		99.80	100.50	78.80	61.40	61.60	39.50							

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1		99.20	100.10	78.65	1060.80	1061.20	1039.35		98.40	99.40	78.60	1060.00	1060.50	1039.30
2		99.20	100.10	78.60	60.80	61.20	39.30		98.40	99.40	78.60	60.00	60.50	39.30
3		99.20	a 100.00	78.60	60.80	61.10	39.30		98.30	99.40	78.60	59.90	60.50	39.30
4		99.15	a 100.00	78.60	60.75	61.10	39.30		98.30	99.40	78.60	59.90	60.50	39.30
5		99.15	99.90	78.60	60.75	61.00	39.30		98.30	99.30	78.60	59.90	60.40	39.30
6		99.10	99.90	78.60	60.70	61.00	39.30	5	98.30	99.30	78.60	59.90	60.40	39.30
7		99.10	99.80	78.60	60.70	60.90	39.30	6	98.30	99.30	78.60	59.90	60.40	39.30
8		99.10	99.70	78.60	60.70	60.80	39.30		98.30	99.30	78.60	59.90	60.40	39.30
9		b 99.05	99.70	78.60	60.65	60.80	39.30		98.30	99.25	78.60	59.90	60.35	39.30
10		b 99.05	99.70	78.60	60.65	60.80	39.30		98.30	99.25	78.60	59.90	60.35	39.30
11		99.00	99.65	78.60	60.60	60.75	39.30		98.30	99.20	78.65	59.90	60.30	39.35
12		99.00	99.65	78.60	60.60	60.75	39.30		98.30	99.20	78.65	59.90	60.30	39.35
13		99.00	99.65	78.60	60.60	60.75	39.30		98.30	99.20	78.65	59.90	60.30	39.35
14		98.90	99.60	78.60	60.50	60.70	39.30		98.30	99.25	78.65	59.90	60.35	39.35
15		98.90	99.60	78.60	60.50	60.70	39.30		98.30	99.30	78.70	59.90	60.40	39.40
16		98.90	99.60	78.60	60.50	60.70	39.30		98.30	99.30	78.70	59.90	60.40	39.40
17		98.90	99.60	78.60	60.50	60.70	39.30		98.30	99.35	78.70	59.90	60.45	39.40
18		98.90	99.60	78.60	60.50	60.70	39.30		98.30	99.35	78.75	59.90	60.45	39.45
19		98.90	99.60	78.60	60.50	60.70	39.30		98.30	99.50	78.75	59.90	60.60	39.45
20		98.85	99.50	78.60	60.45	60.60	39.30		98.20	99.50	78.80	59.90	60.60	39.50
21		98.85	99.50	78.60	60.45	60.60	39.30		98.40	99.60	79.00	60.00	60.70	39.70
22		98.85	99.50	78.60	60.45	60.60	39.30	7	98.40	99.65	79.30	60.00	60.75	40.00
23		98.80	99.50	78.60	60.40	60.60	39.30		98.20	99.70	79.60	59.80	60.80	40.30
24		98.80	99.50	78.60	60.40	60.60	39.30		98.20	99.80	80.50	59.80	60.90	41.20
25		98.80	99.50	78.60	60.40	60.60	39.30		98.20	99.80	80.60	59.80	60.90	41.30
26	4	98.70	99.50	78.60	60.30	60.60	39.30		98.00	99.85	80.90	59.60	60.95	41.60
27		98.60	99.50	78.60	60.20	60.60	39.30		98.00	99.90	81.60	59.60	61.00	42.30
28		98.60	99.50	78.60	60.20	60.60	39.30		97.60	99.90	81.80	59.20	61.00	42.50
29		98.60	99.45	78.60	60.20	60.55	39.30		97.60	99.90	82.40	59.20	61.00	43.10
30		98.60	99.45	78.60	60.20	60.55	39.30	8	97.60	99.90	82.80	59.20	61.00	43.50
31		98.60	99.45	78.60	60.20	60.55	39.30							

1. Took out logs on the 6th. (R. B.) 2. Took out logs on the 17th. (R. B.) 3. Took out some logs on the 23rd. (R. B.) 4. Took out some logs on the 26th. (R. B.) (S.) 5. I am clearing the balance of the logs and driftwood that was left from last fall and also will take out a few more logs. (Apr. 6–18.) (S.) 6. Took out some logs on the 7th–9th. (R. B.) 7. Ferry started—ice all gone. (M.) 8. Have taken out 140 logs and all the driftwood and timber. (S.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	Footnote	MAY 1906 — Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water	Footnote
1	d	97.60	99.90	82.70	1059.20	1061.00	1043.40	...
2	...	97.60	a 100.00	82.60	59.20	61.10	43.30	...
3	...	97.60	100.10	82.90	59.20	61.20	43.60	...
4	...	97.60	100.10	83.30	59.20	61.20	44.00	...
5	...	97.60	100.10	83.65	59.20	61.20	44.35	...
6	...	97.60	100.10	83.70	59.20	61.20	44.40	...
7	...	97.60	b 100.05	83.80	59.20	61.15	44.50	...
8	...	97.55	100.00	83.80	59.15	61.10	44.50	...
9	...	97.55	100.00	83.90	59.15	61.10	44.60	...
10	...	97.50	100.00	83.80	59.10	61.10	44.50	...
11	...	97.50	100.00	83.80	59.10	61.10	44.50	...
12	...	97.60	100.00	83.70	59.20	61.10	44.40	...
13	...	97.60	100.00	83.60	59.20	61.10	44.30	...
14	...	97.60	100.00	83.50	59.20	61.10	44.20	...
15	...	97.60	100.00	83.50	59.20	61.10	44.20	...
16	...	97.60	100.00	83.50	59.20	61.10	44.20	...
17	...	97.60	100.00	83.50	59.20	61.10	44.20	...
18	...	97.60	100.00	83.50	59.20	61.10	44.20	...
19	...	97.60	100.00	83.50	59.20	61.10	44.20	...
20	1	97.60	99.90	83.50	59.20	61.00	44.20	...
21	...	97.60	99.80	83.40	59.20	60.90	44.10	2
22	...	97.50	99.75	83.30	59.10	60.85	44.00	...
23	...	97.50	99.80	83.25	59.10	60.90	43.95	...
24	...	97.40	99.80	83.25	59.00	60.90	43.95	...
25	...	97.40	99.60	83.20	59.00	60.70	43.90	...
26	...	97.40	99.50	b 83.05	59.00	60.60	43.75	...
27	...	97.40	99.75	83.00	59.00	60.85	43.70	...
28	...	97.40	99.80	82.90	59.00	60.90	43.60	...
29	...	97.40	99.80	82.85	59.00	60.90	43.55	...
30	...	97.40	99.70	82.80	59.00	60.80	43.50	...
31	...	97.40	99.75	82.80	59.00	60.85	43.50	...

Date	Footnote	JUNE 1906 — Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water
1	...	97.40	99.80	82.70	1059.00	1060.90	1043.40
2	...	97.40	99.80	82.70	59.00	60.90	43.40
3	...	97.40	99.85	82.60	59.00	60.95	43.30
4	...	97.40	99.80	82.60	59.00	60.90	43.30
5	...	97.40	99.85	82.60	59.00	60.95	43.30
6	...	97.40	99.90	82.50	59.00	61.00	43.20
7	...	97.40	99.95	82.45	59.00	61.05	43.15
8	...	97.40	100.00	82.40	59.00	61.10	43.10
9	...	97.40	99.80	82.30	59.00	60.90	43.00
10	...	97.40	99.85	82.30	59.00	60.95	43.00
11	...	97.40	99.85	82.20	59.00	60.95	42.90
12	...	97.40	99.80	82.15	59.00	60.90	42.85
13	...	97.50	100.00	82.15	59.10	61.10	42.85
14	...	97.50	100.00	82.10	59.10	61.10	42.80
15	...	97.40	99.90	82.10	59.00	61.00	42.80
16	...	97.40	99.85	82.10	59.00	60.95	42.80
17	...	97.40	99.90	82.10	59.00	61.00	42.80
18	...	97.50	99.90	82.20	59.10	61.00	42.90
19	...	97.50	99.90	82.40	59.10	61.00	43.10
20	...	97.60	100.00	82.50	59.20	61.10	43.20
21	...	97.60	99.50	82.50	59.20	60.60	43.20
22	...	97.60	99.80	82.50	59.20	60.90	43.20
23	...	97.60	99.90	82.40	59.20	61.00	43.10
24	...	97.50	99.80	82.50	59.10	60.90	43.20
25	...	97.50	99.90	82.60	59.10	61.00	43.30
26	...	97.60	100.00	82.70	59.20	61.10	43.40
27	...	97.60	100.00	82.60	59.20	61.10	43.30
28	...	97.60	100.00	82.70	59.20	61.10	43.40
29	...	97.70	100.20	82.80	59.30	61.30	43.50
30	...	97.70	100.20	82.80	59.30	61.30	43.50
31	...						

Date	Footnote	JULY 1906 — Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water	Footnote
1	...	97.70	100.10	82.80	1059.30	1061.20	1043.50	...
2	...	97.70	100.00	82.80	59.30	61.10	43.50	...
3	...	97.60	100.00	82.70	59.20	61.10	43.40	...
4	...	97.60	99.90	82.70	59.20	61.00	43.40	...
5	...	97.60	99.90	82.80	59.20	61.00	43.50	...
6	...	97.60	99.90	82.80	59.20	61.00	43.50	...
7	...	97.60	100.00	82.90	59.20	61.10	43.60	...
8	...	97.60	99.90	82.80	59.20	61.00	43.50	...
9	...	97.60	99.90	82.80	59.20	61.00	43.50	...
10	...	97.60	100.00	82.90	59.20	61.10	43.60	...
11	...	97.60	100.00	82.90	59.20	61.10	43.60	...
12	...	97.60	100.20	82.80	59.20	61.30	43.50	...
13	...	97.60	100.20	82.80	59.20	61.30	43.50	...
14	...	97.80	100.00	82.80	59.40	61.10	43.50	...
15	...	97.70	99.90	82.90	59.30	61.00	43.60	...
16	...	97.60	99.90	82.90	59.20	61.00	43.60	...
17	...	97.60	a 100.00	82.90	59.20	61.10	43.60	...
18	...	97.60	99.90	82.80	59.20	61.00	43.50	...
19	...	97.60	99.90	82.80	59.20	61.00	43.50	...
20	...	97.60	100.00	82.80	59.20	61.10	43.50	...
21	...	97.60	99.90	82.70	59.20	61.00	43.40	...
22	3	97.60	99.85	82.70	59.20	60.95	43.40	...
23	...	97.65	99.90	82.80	59.25	61.00	43.50	...
24	...	97.65	99.90	82.80	59.25	61.00	43.50	...
25	...	97.65	99.90	82.75	59.25	61.00	43.45	...
26	...	97.60	99.85	82.75	59.20	60.95	43.45	...
27	...	97.60	99.95	82.70	59.20	61.05	43.40	...
28	...	97.60	99.85	82.70	59.20	60.95	43.40	...
29	...	97.60	99.80	82.75	59.20	60.90	43.45	...
30	...	97.60	99.70	82.70	59.20	60.80	43.40	...
31	...	97.60	99.80	82.70	59.20	60.90	43.40	...

Date	Footnote	AUGUST 1906 — Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water
1	...	97.60	99.90	82.60	1059.20	1061.00	1043.30
2	...	97.70	99.95	82.40	59.30	61.05	43.10
3	...	97.70	99.90	82.35	59.30	61.00	43.05
4	...	97.70	99.90	82.30	59.30	61.00	43.00
5	...	97.70	99.80	82.30	59.30	60.90	43.00
6	...	97.80	99.85	82.20	59.40	60.95	42.90
7	...	97.80	99.80	82.20	59.40	60.90	42.90
8	...	97.70	99.80	82.20	59.30	60.90	42.90
9	...	97.70	99.70	82.15	59.30	60.80	42.85
10	...	97.70	99.65	82.10	59.30	60.75	42.80
11	...	97.70	99.65	82.10	59.30	60.75	42.80
12	...	97.70	99.70	82.00	59.30	60.80	42.70
13	...	97.70	99.75	81.90	59.30	60.85	42.60
14	...	97.70	99.75	81.90	59.30	60.85	42.60
15	...	97.70	99.70	81.90	59.30	60.80	42.60
16	...	97.70	99.70	81.80	59.30	60.80	42.50
17	...	97.70	99.70	81.65	59.30	60.80	42.35
18	...	97.70	99.70	81.65	59.30	60.80	42.35
19	...	97.60	99.60	81.50	59.20	60.70	42.20
20	...	97.60	99.35	81.50	59.20	60.45	42.20
21	...	97.60	99.40	81.50	59.20	60.50	42.20
22	...	97.60	99.45	81.40	59.20	60.55	42.10
23	...	97.50	99.40	81.40	59.10	60.50	42.10
24	...	97.50	99.50	81.35	59.10	60.60	42.05
25	...	97.50	99.50	81.35	59.10	60.60	42.05
26	...	97.50	99.50	81.30	59.10	60.60	42.00
27	...	97.50	99.40	81.30	59.10	60.50	42.00
28	...	97.55	99.50	81.30	59.15	60.60	42.00
29	...	97.50	99.40	81.25	59.10	60.50	41.95
30	...	97.50	99.45	81.20	59.10	60.55	41.90
31	...	97.50	99.35	81.15	59.10	60.45	41.85

1. Water is dropping down a little in both lakes. Have lots of trouble with driftwood blocking up at the dam. (May 20-31). (S.)
2. Rain; strong NW. wind. (M.)
3. Heavy wind. NW. (M.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	SEPTEMBER 1906							OCTOBER						
	Footnote	Local Datum			Sea-level Datum			Footnote	Local Datum			Sea-level Datum		
		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1	...	97.50	99.40	81.15	1059.10	1060.50	1041.85	...	98.50	98.90	78.70	1060.10	1060.00	1039.40
2	...	97.60	99.40	81.15	59.20	60.50	41.85	...	98.50	98.90	78.90	60.10	60.00	39.60
3	...	97.60	99.30	81.10	59.20	60.40	41.80	...	98.50	98.90	78.90	60.10	60.00	39.60
4	1	97.60	99.35	81.10	59.20	60.45	41.80	...	98.40	98.80	78.80	60.00	59.90	39.50
5	...	97.80	99.30	b 81.05	59.40	60.40	41.75	...	98.40	98.70	78.70	60.00	59.80	39.40
6	...	97.80	99.30	81.00	59.40	60.40	41.70	...	98.00	98.90	78.80	59.60	60.00	39.50
7	...	97.90	99.30	a 81.00	59.50	60.40	41.70	...	98.00	98.80	78.90	59.60	59.90	39.60
8	...	98.10	99.35	b 81.05	59.70	60.45	41.75	...	98.00	98.50	78.90	59.60	59.60	39.60
9	...	98.10	99.40	80.90	59.70	60.50	41.60	...	97.90	98.80	79.20	59.50	59.90	39.90
10	...	98.10	99.30	80.90	59.70	60.40	41.60	...	97.90	98.90	79.40	59.50	60.00	40.10
11	...	98.10	99.20	80.80	59.70	60.30	41.50	...	97.90	98.70	79.60	59.50	59.80	40.30
12	...	98.10	99.15	80.70	59.70	60.25	41.40	...	97.90	98.70	79.60	59.50	59.80	40.30
13	...	98.00	99.20	80.70	59.60	60.30	41.40	...	97.80	98.70	79.80	59.40	59.80	40.50
14	...	98.00	99.40	80.70	59.60	60.50	41.40	...	97.80	98.80	79.80	59.40	59.90	40.50
15	...	98.00	99.20	80.60	59.60	60.30	41.30	...	97.90	98.85	79.70	59.50	59.95	40.40
16	...	98.00	99.20	80.60	59.60	60.30	41.30	...	97.90	98.85	79.70	59.50	59.95	40.40
17	...	a 98.00	a 99.00	80.50	59.60	60.10	41.20	...	97.90	98.90	79.70	59.50	60.00	40.40
18	...	98.20	99.10	80.40	59.80	60.20	41.10	...	a 98.00	98.65	79.70	59.60	59.75	40.40
19	2	98.40	b 99.05	79.80	60.00	60.15	40.50	...	a 98.00	98.50	79.70	59.60	59.60	40.40
20	...	98.60	99.10	78.40	60.20	60.20	39.10	...	98.10	98.50	79.60	59.70	59.60	40.30
21	...	98.70	99.10	78.40	60.30	60.20	39.10	...	98.10	98.60	79.70	59.70	59.70	40.40
22	...	98.70	a 99.00	78.60	60.30	60.10	39.30	...	98.10	98.80	79.80	59.70	59.90	40.50
23	...	98.60	99.10	78.60	60.20	60.20	39.30	...	98.10	98.50	79.80	59.70	59.60	40.50
24	...	98.50	99.30	78.70	60.10	60.40	39.40	...	98.10	98.50	79.70	59.70	59.60	40.40
25	...	98.50	99.10	78.70	60.10	60.20	39.40	...	a 98.00	98.55	79.70	59.60	59.65	40.40
26	...	98.50	99.20	78.70	60.10	60.30	39.40	...	a 98.00	98.40	79.60	59.60	59.50	40.30
27	...	98.50	99.20	78.70	60.10	60.30	39.40	...	b 98.05	98.20	79.60	59.65	59.30	40.30
28	...	98.50	99.20	78.70	60.10	60.30	39.40	...	98.10	98.20	79.50	59.70	59.30	40.20
29	...	98.50	98.80	78.70	60.10	59.90	39.40	...	98.10	98.40	79.50	59.70	59.50	40.20
30	...	98.50	99.20	78.70	60.10	60.30	39.40	...	98.15	98.70	79.60	59.75	59.80	40.30
31	...	.....	.....	.....	.....	.....	.....	...	98.10	98.70	79.60	59.70	59.80	40.30

Date	NOVEMBER 1906							DECEMBER						
	Footnote	Local Datum			Sea-level Datum			Footnote	Local Datum			Sea-level Datum		
		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1	...	98.10	98.30	79.40	1059.70	1059.40	1040.10	...	97.70	98.20	a 78.00	1059.30	1059.30	1038.70
2	...	98.15	98.30	79.30	59.75	59.40	40.00	...	97.70	98.20	a 78.00	59.30	59.30	38.70
3	...	98.15	98.30	79.30	59.75	59.40	40.00	...	97.80	98.20	a 78.00	59.40	59.30	38.70
4	...	98.10	98.40	79.10	59.70	59.50	39.80	...	97.80	98.20	77.90	59.40	59.30	38.60
5	...	b 98.05	98.40	a 79.00	59.65	59.50	39.70	...	97.80	98.30	77.90	59.40	59.40	38.60
6	...	b 98.05	98.30	a 79.00	59.65	59.40	39.70	...	97.80	98.30	77.90	59.40	59.40	38.60
7	...	98.10	98.30	78.80	59.70	59.40	39.50	...	97.80	98.30	77.85	59.40	59.40	38.55
8	...	98.10	98.40	78.70	59.70	59.50	39.40	...	97.75	98.25	77.85	59.35	59.35	38.55
9	...	98.10	98.30	78.70	59.70	59.40	39.40	...	97.75	98.25	77.80	59.35	59.35	38.50
10	...	98.10	98.30	78.60	59.70	59.40	39.30	...	97.70	98.25	77.80	59.30	59.35	38.50
11	...	98.15	98.40	78.50	59.75	59.50	39.20	...	97.70	98.20	77.80	59.30	59.30	38.50
12	...	98.15	98.30	78.30	59.75	59.40	39.00	...	97.70	98.20	77.75	59.30	59.30	38.45
13	...	98.20	98.30	78.30	59.80	59.40	39.00	...	97.70	98.20	77.80	59.30	59.30	38.50
14	...	98.20	98.20	78.10	59.80	59.30	38.80	...	97.65	98.20	77.80	59.25	59.30	38.50
15	...	98.20	98.20	a 78.00	59.80	59.30	38.70	...	97.65	98.20	77.75	59.25	59.30	38.45
16	...	98.20	98.20	77.90	59.80	59.30	38.60	...	97.65	98.20	77.75	59.25	59.30	38.45
17	...	98.20	98.20	77.90	59.80	59.30	38.60	...	97.65	98.20	77.70	59.25	59.30	38.40
18	...	a 98.00	98.50	a 78.00	59.60	59.60	38.70	...	97.65	98.20	77.70	59.25	59.30	38.40
19	...	98.00	98.50	a 78.00	59.60	59.60	38.70	...	97.70	98.25	77.70	59.30	59.35	38.40
20	...	98.00	98.40	78.10	59.60	59.50	38.80	...	97.70	98.25	77.70	59.30	59.35	38.40
21	...	97.90	98.40	78.10	59.50	59.50	38.80	...	97.70	98.25	77.70	59.30	59.35	38.40
22	...	97.90	98.30	78.10	59.50	59.40	38.80	...	97.70	98.20	77.70	59.30	59.30	38.40
23	...	97.90	98.40	78.10	59.50	59.50	38.80	...	97.70	98.20	77.75	59.30	59.30	38.45
24	...	97.90	98.40	78.10	59.50	59.50	38.80	...	.....	.....	.....	.....	.....	.....
25	...	97.80	98.30	78.10	59.40	59.40	38.80	...	.....	.....	.....	.....	.....	.....
26	...	97.80	98.30	a 78.00	59.40	59.40	38.70	...	97.70	98.20	77.70	59.30	59.30	38.40
27	...	97.80	98.25	a 78.00	59.40	59.35	38.70	...	97.70	98.20	77.70	59.30	59.30	38.40
28	...	97.80	98.20	a 78.00	59.40	59.30	38.70	...	97.70	98.20	77.75	59.30	59.30	38.45
29	...	97.80	98.20	a 78.00	59.40	59.30	38.70	...	97.70	98.20	77.75	59.30	59.30	38.45
30	...	97.80	98.20	a 78.00	59.40	59.30	38.70	...	97.70	98.20	77.75	59.30	59.30	38.45
31	...	.....	.....	.....	.....	.....	.....	...	97.70	98.20	77.75	59.30	59.30	38.45

1. Have put in 50 logs up to present date. Big quantity of driftwood. (Sept. 4-8) (R. B.) (S.)
2. Have all logs in on N. side, had to leave few out on S. side on account of navigation on back lake. By right I should have had them all in by this time. (Sept. 19-30.) (S.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	Footnote	JANUARY 1907 Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water	Footnote	FEBRUARY 1907 Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water
1	...	97.70	98.20	77.70	1059.30	1059.30	1038.40	...	97.55	98.10	77.45	1059.15	1059.20	1038.15
2	...	97.60	98.10	77.70	59.20	59.20	38.40	...	97.55	b 98.05	77.45	59.15	59.15	38.15
3	...	97.60	98.10	77.70	59.20	59.20	38.40	...	97.50	b 98.05	77.45	59.10	59.15	38.15
4	...	97.60	98.10	77.70	59.20	59.20	38.40	...	97.50	b 98.05	77.40	59.10	59.15	38.10
5	...	97.60	98.10	77.60	59.20	59.20	38.30	...	97.50	98.00	77.40	59.10	59.10	38.10
6	...	97.60	98.10	77.60	59.20	59.20	38.30	...	97.50	98.00	77.40	59.10	59.10	38.10
7	...	97.60	98.10	77.60	59.20	59.20	38.30	...	97.40	97.90	77.40	59.00	59.00	38.10
8	...	97.60	98.10	77.60	59.20	59.20	38.30	...	97.40	97.90	77.40	59.00	59.00	38.10
9	...	97.60	98.10	77.60	59.20	59.20	38.30	...	97.40	97.90	77.35	59.00	59.00	38.05
10	...	97.60	98.10	77.60	59.20	59.20	38.30	...	97.40	97.85	77.35	59.00	58.95	38.05
11	...	97.60	98.10	77.60	59.20	59.20	38.30	...	97.40	97.85	77.35	59.00	58.95	38.05
12	...	97.60	98.10	77.60	59.20	59.20	38.30	...	97.40	97.85	77.35	59.00	58.95	38.05
13	...	97.60	98.10	77.60	59.20	59.20	38.30	...	97.40	97.85	77.35	59.00	58.95	38.05
14	...	97.60	98.10	77.60	59.20	59.20	38.30	...	97.40	97.85	77.35	59.00	58.95	38.05
15	...	97.60	98.10	77.60	59.20	59.20	38.30	...	97.40	97.85	77.30	59.00	58.95	38.00
16	...	97.60	98.10	77.60	59.20	59.20	38.30	...	97.40	97.85	77.30	59.00	58.95	38.00
17	...	97.60	98.10	77.60	59.20	59.20	38.30	...	97.40	97.85	77.30	59.00	58.95	38.00
18	...	97.60	98.10	77.60	59.20	59.20	38.30	...	97.40	97.85	77.30	59.00	58.95	38.00
19	...	97.60	98.10	77.60	59.20	59.20	38.30	...	97.35	97.85	77.25	58.95	58.95	37.95
20	...	97.60	98.10	77.60	59.20	59.20	38.30	...	97.35	97.80	77.25	58.95	58.90	37.95
21	...	97.60	98.10	77.60	59.20	59.20	38.30	...	97.35	97.80	77.25	58.95	58.90	37.95
22	...	97.60	98.10	77.50	59.20	59.20	38.20	...	97.35	97.80	77.25	58.95	58.90	37.95
23	...	97.60	98.10	77.50	59.20	59.20	38.20	...	97.35	97.80	77.25	58.95	58.90	37.95
24	...	97.60	98.10	77.50	59.20	59.20	38.20	...	97.30	97.80	77.25	58.90	58.90	37.95
25	...	97.60	98.10	77.45	59.20	59.20	38.15	...	97.30	97.80	77.25	58.90	58.90	37.95
26	...	97.60	98.10	77.45	59.20	59.20	38.15	...	97.30	97.80	77.20	58.90	58.90	37.90
27	...	97.60	98.10	77.45	59.20	59.20	38.15	...	97.30	97.80	77.20	58.90	58.90	37.90
28	...	97.60	98.10	77.45	59.20	59.20	38.15	...	97.30	97.80	77.20	58.90	58.90	37.90
29	...	97.60	98.10	77.45	59.20	59.20	38.15	...	.....	.....	.....	.....	.....	.....
30	...	97.60	98.10	77.45	59.20	59.20	38.15	...	.....	.....	.....	.....	.....	.....
31	...	97.60	98.10	77.45	59.20	59.20	38.15	...	.....	.....	.....	.....	.....	.....

Date	Footnote	MARCH 1907 Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water	Footnote	APRIL 1907 Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water
1	...	97.30	97.80	77.20	1058.90	1058.90	1037.90	...	97.20	97.50	76.80	1058.80	1058.60	1037.50
2	...	97.25	97.80	77.20	58.85	58.90	37.90	...	97.20	97.50	76.80	58.80	58.60	37.50
3	...	97.25	97.80	77.20	58.85	58.90	37.90	...	97.20	97.50	76.80	58.80	58.60	37.50
4	...	97.20	97.80	77.20	58.80	58.90	37.90	...	97.20	97.50	76.80	58.80	58.60	37.50
5	...	97.20	97.80	77.10	58.80	58.90	37.80	...	97.20	97.50	76.80	58.80	58.60	37.50
6	...	97.20	97.80	77.10	58.80	58.90	37.80	...	97.20	97.50	76.80	58.80	58.60	37.50
7	...	97.20	97.80	77.10	58.80	58.90	37.80	...	97.15	97.40	76.80	58.75	58.50	37.50
8	...	97.20	97.80	77.10	58.80	58.90	37.80	...	97.15	97.40	76.90	58.75	58.50	37.60
9	...	97.20	97.80	77.10	58.80	58.90	37.80	...	97.15	97.40	76.90	58.75	58.50	37.60
10	...	97.20	97.80	77.10	58.80	58.90	37.80	...	97.10	97.40	76.90	58.70	58.50	37.60
11	...	97.20	97.80	77.10	58.80	58.90	37.80	...	97.10	97.40	76.90	58.70	58.50	37.60
12	...	97.20	97.80	77.10	58.80	58.90	37.80	...	97.10	97.40	76.90	58.70	58.50	37.60
13	...	97.20	97.80	77.10	58.80	58.90	37.80	...	97.10	97.40	76.90	58.70	58.50	37.60
14	...	97.20	97.80	77.10	58.80	58.90	37.80	...	97.10	97.40	76.90	58.70	58.50	37.60
15	...	97.20	97.80	77.10	58.80	58.90	37.80	...	97.10	97.40	76.90	58.70	58.50	37.60
16	...	97.20	97.80	77.10	58.80	58.90	37.80	...	97.10	97.40	76.90	58.70	58.50	37.60
17	...	97.20	97.80	77.10	58.80	58.90	37.80	...	97.10	97.40	76.90	58.70	58.50	37.60
18	...	97.20	97.80	b 77.05	58.80	58.90	37.75	...	97.10	97.40	76.90	58.70	58.50	37.60
19	...	97.20	97.75	b 77.05	58.80	58.85	37.75	...	97.10	97.40	76.90	58.70	58.50	37.60
20	...	97.20	97.75	77.00	58.80	58.85	37.70	...	97.10	97.40	76.90	58.70	58.50	37.60
21	...	97.20	97.75	a 77.00	58.80	58.85	37.70	...	97.10	97.40	76.90	58.70	58.50	37.60
22	...	97.20	97.70	a 77.00	58.80	58.80	37.70	...	97.10	97.40	76.90	58.70	58.50	37.60
23	...	97.20	97.70	a 77.00	58.80	58.80	37.70	...	97.10	97.40	76.90	58.70	58.50	37.60
24	...	97.20	97.65	76.95	58.80	58.75	37.65	...	97.10	97.40	76.90	58.70	58.50	37.60
25	...	97.20	97.60	76.95	58.80	58.70	37.65	...	97.10	97.40	76.90	58.70	58.50	37.60
26	...	97.20	97.60	76.90	58.80	58.70	37.60	...	97.10	97.40	76.90	58.70	58.50	37.60
27	...	97.20	97.60	76.90	58.80	58.70	37.60	...	97.10	97.40	76.90	58.70	58.50	37.60
28	...	97.20	97.60	76.90	58.80	58.70	37.60	...	97.10	97.40	76.95	58.70	58.50	37.65
29	...	97.20	97.60	76.85	58.80	58.70	37.55	...	97.10	97.40	76.95	58.70	58.50	37.65
30	...	97.20	97.55	76.85	58.80	58.65	37.55	...	97.10	97.40	76.95	58.70	58.50	37.65
31	...	97.20	97.55	76.80	58.80	58.65	37.50	...	.....	.....	.....	.....	.....	.....

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	Footnote	MAY 1907 Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water	Footnote	JUNE 1907 Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water
1	...	97.10	97.40	76.95	1058.70	1058.50	1037.65	...	97.30	98.20	77.40	1058.90	1059.30	1038.10
2	...	97.10	97.40	76.95	58.70	58.50	37.65	...	97.30	98.20	77.40	58.90	59.30	38.10
3	...	97.10	97.40	76.95	58.70	58.50	37.65	...	97.20	98.30	77.40	58.80	59.40	38.10
4	...	97.00	97.40	76.95	58.60	58.50	37.65	...	97.00	98.30	77.45	58.60	59.40	38.15
5	...	97.00	97.40	77.00	58.60	58.50	37.70	...	96.90	98.30	77.50	58.50	59.40	38.20
6	...	97.00	97.40	77.00	58.60	58.50	37.70	...	96.70	98.30	78.00	58.30	59.40	38.70
7	...	97.00	97.45	77.10	58.60	58.55	37.80	...	96.70	98.30	78.20	58.30	59.40	38.90
8	...	97.00	97.45	77.10	58.60	58.55	37.80	...	96.70	98.30	78.25	58.30	59.40	38.95
9	...	97.00	97.45	77.15	58.60	58.55	37.85	...	96.70	98.40	78.30	58.30	59.50	39.00
10	...	97.00	97.50	77.15	58.60	58.60	37.85	...	96.70	98.45	78.30	58.30	59.55	39.00
11	...	97.00	99.55	77.20	58.60	58.65	37.90	...	96.50	98.45	78.45	58.10	59.55	39.15
12	...	97.00	97.60	77.25	58.60	58.70	37.95	...	96.40	98.50	78.60	58.00	59.60	39.30
13	...	97.00	97.60	77.35	58.60	58.70	38.05	...	96.40	98.55	78.70	58.00	59.65	39.40
14	...	97.00	97.70	77.40	58.60	58.80	38.10	...	96.40	98.60	78.80	58.00	59.70	39.50
15	...	97.00	97.70	77.40	58.60	58.80	38.10	...	96.40	98.60	78.80	58.00	59.70	39.50
16	...	97.00	97.75	77.45	58.60	58.85	38.15	...	96.50	98.70	78.90	58.10	59.80	39.60
17	1	97.10	97.80	77.40	58.70	58.90	38.10	2	96.50	98.60	78.90	58.10	59.70	39.60
18	...	97.10	97.85	77.40	58.70	58.95	38.10	...	96.50	98.50	78.90	58.10	59.60	39.60
19	...	97.15	97.85	77.45	58.75	58.95	38.15	...	96.60	98.70	78.95	58.20	59.80	39.65
20	...	97.20	97.90	77.45	58.80	59.00	38.15	...	96.60	98.70	79.00	58.20	59.80	39.70
21	...	97.20	97.90	77.50	58.80	59.00	38.20	...	96.60	98.70	79.00	58.20	59.80	39.70
22	...	97.20	97.90	77.50	58.80	59.00	38.20	...	96.55	98.70	79.00	58.15	59.80	39.70
23	...	97.25	97.95	77.50	58.85	59.05	38.20	...	96.55	98.80	79.10	58.15	59.90	39.80
24	...	97.25	98.00	77.50	58.85	59.10	38.20	3	96.60	98.70	79.10	58.20	59.80	39.80
25	...	97.20	98.00	77.50	58.80	59.10	38.20	4	96.60	98.55	79.10	58.20	59.65	39.80
26	...	97.20	98.00	77.40	58.80	59.10	38.10	d	96.60	98.70	79.10	58.20	59.80	39.80
27	...	97.30	98.10	77.40	58.90	59.20	38.10	...	96.60	98.80	79.10	58.20	59.90	39.80
28	...	97.30	98.10	77.40	58.90	59.20	38.10	...	96.60	98.80	79.10	58.20	59.90	39.80
29	...	97.30	98.10	77.40	58.90	59.20	38.10	...	96.50	98.60	79.20	58.10	59.70	39.90
30	...	97.30	98.15	77.40	58.90	59.25	38.10	...	96.55	98.80	79.20	58.15	59.90	39.90
31	...													

Date	Footnote	JULY 1907 Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water	Footnote	AUGUST 1907 Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water
1	...	96.60	98.80	79.10	1058.20	1059.90	1039.80	...	97.60	98.80	78.00	1059.20	1059.90	1038.70
2	...	96.60	98.90	79.10	58.20	60.00	39.80	...	97.60	98.90	77.90	59.20	60.00	38.60
3	...	96.75	98.70	79.00	58.35	59.80	39.70	d	97.80	99.10	77.80	59.40	60.20	38.50
4	...	96.70	98.70	79.00	58.30	59.80	39.70	...	97.80	99.40	77.80	59.40	60.50	38.50
5	...	96.70	98.80	79.10	58.30	59.90	39.80	...	97.95	99.30	77.90	59.55	60.40	38.60
6	...	96.70	98.80	79.00	58.30	59.90	39.70	...	97.95	99.30	77.90	59.55	60.40	38.60
7	...	96.70	98.75	79.00	58.30	59.85	39.70	...	97.95	99.20	77.80	59.55	60.30	38.50
8	...	96.80	98.70	78.90	58.40	59.80	39.60	...	98.00	99.20	77.80	59.60	60.30	38.50
9	...	96.80	98.70	78.90	58.40	59.80	39.60	...	98.00	99.20	77.80	59.60	60.30	38.50
10	...	96.80	98.70	78.90	58.40	59.80	39.60	...	98.00	99.30	77.70	59.60	60.40	38.40
11	...	96.80	98.80	78.80	58.40	59.90	39.50	5	98.00	99.60	77.70	59.60	60.70	38.40
12	...	96.80	98.90	78.60	58.40	60.00	39.30	...	98.00	99.30	77.70	59.60	60.40	38.40
13	...	96.80	98.90	78.60	58.40	60.00	39.30	...	98.00	99.40	77.80	59.60	60.50	38.50
14	...	96.80	98.95	78.60	58.40	60.05	39.30	...	98.00	99.50	77.70	59.60	60.60	38.40
15	...	96.80	98.95	78.60	58.40	60.05	39.30	...	98.00	99.60	77.80	59.60	60.70	38.50
16	...	96.80	98.90	78.60	58.40	60.00	39.30	6	98.00	99.70	77.80	59.60	60.80	38.50
17	...	96.80	98.80	78.60	58.40	59.90	39.30	...	98.00	99.60	77.70	59.60	60.70	38.40
18	...	96.70	98.80	78.60	58.30	59.90	39.30	...	98.00	99.70	77.90	59.60	60.80	38.60
19	...	96.90	98.95	78.60	58.50	60.05	39.30	7	98.00	99.50	77.90	59.60	60.60	38.60
20	...	97.10	98.90	78.40	58.70	60.00	39.10	...	97.90	99.60	78.10	59.50	60.70	38.80
21	...	97.20	98.90	78.40	58.80	60.00	39.10	...	97.90	99.70	78.20	59.50	60.80	38.90
22	...	97.20	98.95	78.30	58.80	60.05	39.00	...	97.90	99.70	78.20	59.50	60.80	38.90
23	...	97.20	99.00	78.20	58.80	60.10	38.90	...	98.00	99.80	78.30	59.60	60.90	39.00
24	...	97.40	99.00	78.20	59.00	60.10	38.90	...	98.00	99.70	78.40	59.60	60.80	39.10
25	...	97.50	98.95	78.20	59.10	60.05	38.90	...	98.10	99.60	78.30	59.70	60.70	39.00
26	...	97.50	98.90	78.20	59.10	60.00	38.90	...	98.00	99.60	78.45	59.60	60.70	39.15
27	...	97.50	99.00	78.25	59.10	60.10	38.95	...	98.00	99.70	78.60	59.60	60.80	39.30
28	...	97.50	99.30	78.30	59.10	60.40	39.00	...	97.90	99.70	78.65	59.50	60.80	39.35
29	...	97.60	99.10	78.30	59.20	60.20	39.00	...	97.85	99.70	78.70	59.45	60.80	39.40
30	...	97.60	99.10	78.20	59.20	60.20	38.90	...	97.85	99.70	78.70	59.45	60.80	39.40
31	...	97.50	99.00	78.00	59.10	60.10	38.70	...	97.85	99.70	78.70	59.45	60.80	39.40

1. Ferry started. (M.) 2. Heavy S. and SW. winds, light shower. (M.) 3. Strong wind, shower. (M.) 4. The following is a copy of a telegram sent by Hansen to the Dept. of Public Works on 25th. (Engrs.) "Gauge ready to-day 98.55 on Lake of Woods." 5. High wind, showers. (M.) 6. Rain all day, high wind. (M.) 7. Showery, high wind. (M.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	Footnote	SEPTEMBER 1907 — Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water	Footnote	OCTOBER — Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water
1	...	97.80	99.70	78.80	1059.40	1060.80	1039.50	...	97.70	100.80	80.90	1059.30	1061.90	1041.60
2	...	97.80	99.70	78.90	59.40	60.80	39.60	...	97.70	100.70	80.95	59.30	61.80	41.65
3	...	97.80	99.65	79.00	59.40	60.75	39.70	...	97.70	100.60	80.90	59.30	61.70	41.60
4	...	97.80	99.80	79.00	59.40	60.90	39.70	...	97.70	100.80	81.10	59.30	61.90	41.80
5	...	97.80	99.80	79.10	59.40	60.90	39.80	...	97.70	100.70	81.10	59.30	61.80	41.80
6	...	97.80	99.80	79.15	59.40	60.90	39.85	...	97.70	100.70	81.20	59.30	61.80	41.90
7	...	97.80	99.90	79.20	59.40	61.00	39.90	...	97.80	100.60	81.20	59.40	61.70	41.90
8	...	97.80	99.95	79.30	59.40	61.05	40.00	...	97.80	100.80	81.20	59.40	61.90	41.90
9	...	97.80	99.95	79.25	59.40	61.05	39.95	...	97.90	100.90	81.30	59.50	62.00	42.00
10	...	97.80	100.00	79.25	59.40	61.10	39.95	...	97.95	100.80	81.30	59.55	61.90	42.00
11	...	97.90	99.95	79.30	59.50	61.05	40.00	...	98.00	100.80	81.35	59.60	61.90	42.05
12	...	97.90	99.80	79.35	59.50	60.90	40.05	...	98.10	100.90	81.40	59.70	62.00	42.10
13	...	97.90	b 100.05	79.35	59.50	61.15	40.05	...	98.00	101.10	81.40	59.60	62.20	42.10
14	...	98.10	100.00	79.45	59.70	61.10	40.15	d	97.90	100.85	81.40	59.50	61.95	42.10
15	...	98.10	100.00	79.50	59.70	61.10	40.20	...	97.90	100.90	81.40	59.50	62.00	42.10
16	...	98.20	100.00	79.60	59.80	61.10	40.30	...	97.90	100.85	81.40	59.50	61.95	42.10
17	...	98.20	100.10	79.60	59.80	61.20	40.30	...	98.00	100.80	81.40	59.60	61.60	42.10
18	...	98.10	100.10	79.75	59.70	61.20	40.45	...	98.10	100.85	81.45	59.70	61.95	42.15
19	...	98.10	100.20	79.80	59.70	61.30	40.50	...	98.10	100.95	81.45	59.70	62.05	42.15
20	...	98.00	100.20	79.80	59.60	61.30	40.50	...	98.20	101.00	81.50	59.80	62.10	42.20
21	...	98.00	100.40	79.95	59.60	61.50	40.65	...	98.15	101.15	81.50	59.75	62.25	42.20
22	...	97.90	100.60	80.10	59.50	61.70	40.80	...	98.15	100.80	81.50	59.75	61.90	42.20
23	...	97.90	100.70	80.30	59.50	61.80	41.00	...	98.20	101.00	81.60	59.80	62.10	42.30
24	...	97.90	100.40	80.40	59.50	61.50	41.10	...	98.10	100.90	81.60	59.70	62.00	42.30
25	...	97.80	100.60	80.50	59.40	61.70	41.20	...	98.10	100.85	81.60	59.70	61.95	42.30
26	...	97.80	100.50	80.70	59.40	61.60	41.40	...	98.10	100.80	81.65	59.70	61.90	42.35
27	...	97.75	100.60	80.70	59.35	61.70	41.40	...	98.00	101.10	81.70	59.60	62.20	42.40
28	...	97.70	100.70	80.75	59.30	61.80	41.45	...	98.00	100.90	81.70	59.60	62.00	42.40
29	...	97.70	100.80	80.90	59.30	61.90	41.60	...	98.10	100.90	81.80	59.70	62.00	42.50
30	...	97.70	100.65	80.90	59.30	61.75	41.60	...	98.10	100.90	81.80	59.70	62.00	42.50
31	...	.....	.....	.....	.....	.....	.....	...	98.10	100.90	81.70	59.70	62.00	42.40

Date	Footnote	NOVEMBER 1907 — Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water	Footnote	DECEMBER — Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water
1	...	98.10	100.90	81.70	1059.70	1062.00	1042.40	...	98.20	100.70	81.20	1059.80	1061.80	1041.90
2	...	98.10	100.80	81.70	59.70	61.90	42.40	...	98.20	100.70	81.20	59.80	61.80	41.90
3	...	98.15	100.90	81.70	59.75	62.00	42.40	...	98.20	100.80	81.20	59.80	61.90	41.90
4	...	98.15	100.90	81.60	59.75	62.00	42.30	...	98.20	100.80	81.15	59.80	61.90	41.85
5	...	98.15	100.80	81.60	59.75	61.90	42.30	...	98.20	100.80	81.15	59.80	61.90	41.85
6	...	98.15	100.90	81.70	59.75	62.00	42.40	...	98.20	100.80	81.10	59.80	61.90	41.80
7	...	98.15	101.00	81.70	59.75	62.10	42.40	...	98.20	100.80	81.10	59.80	61.90	41.80
8	...	98.20	101.00	81.70	59.80	62.10	42.40	...	98.20	100.80	81.10	59.80	61.90	41.80
9	...	98.20	100.70	81.60	59.80	61.80	42.30	...	98.20	100.80	81.10	59.80	61.90	41.80
10	...	98.15	100.70	81.60	59.75	61.80	42.30	...	98.20	100.80	81.00	59.80	61.90	41.70
11	...	98.15	100.80	81.60	59.75	61.90	42.30	...	98.20	100.80	81.00	59.80	61.90	41.70
12	...	98.15	101.20	81.80	59.75	62.30	42.50	...	98.20	100.80	80.95	59.80	61.90	41.65
13	...	98.15	100.70	81.70	59.75	61.80	42.40	...	98.20	100.80	80.90	59.80	61.90	41.60
14	...	98.15	100.90	81.70	59.75	62.00	42.40	...	98.20	100.80	80.90	59.80	61.90	41.60
15	1	98.15	100.90	81.70	59.75	62.00	42.40	...	98.20	100.80	80.90	59.80	61.90	41.60
16	...	98.15	100.80	81.70	59.75	61.90	42.40	...	98.20	100.70	80.80	59.80	61.80	41.50
17	...	98.20	100.80	81.60	59.80	61.90	42.30	...	98.20	100.70	80.80	59.80	61.80	41.50
18	...	98.20	100.80	81.60	59.80	61.90	42.30	...	98.20	100.60	80.80	59.80	61.70	41.50
19	...	98.20	100.90	81.50	59.80	62.00	42.20	...	98.20	100.60	80.75	59.80	61.70	41.45
20	...	98.20	100.80	81.50	59.80	61.90	42.20	...	98.20	100.60	80.75	59.80	61.70	41.45
21	...	98.20	100.80	81.50	59.80	61.90	42.20	...	98.20	100.60	80.75	59.80	61.70	41.45
22	...	98.20	100.90	81.40	59.80	62.00	42.10	...	98.20	100.60	80.70	59.80	61.70	41.40
23	...	98.20	100.80	81.40	59.80	61.90	42.10	...	98.20	100.60	80.70	59.80	61.70	41.40
24	2	98.20	100.80	81.35	59.80	61.90	42.05	...	98.20	100.60	80.70	59.80	61.70	41.40
25	...	98.20	100.80	81.30	59.80	61.90	42.00	...	98.20	100.60	80.70	59.80	61.70	41.40
26	...	98.20	100.80	81.20	59.80	61.90	41.90	...	98.20	100.60	80.70	59.80	61.70	41.40
27	3	98.20	100.70	81.20	59.80	61.80	41.90	...	98.20	100.60	80.70	59.80	61.70	41.40
28	...	98.20	100.70	81.20	59.80	61.80	41.90	...	98.20	100.60	80.70	59.80	61.70	41.40
29	...	98.20	100.70	81.20	59.80	61.80	41.90	...	98.20	100.60	80.70	59.80	61.70	41.40
30	...	98.20	100.70	81.20	59.80	61.80	41.90	...	98.20	100.60	80.70	59.80	61.70	41.40
31	...	.....	.....	.....	.....	.....	.....	...	98.20	100.60	80.70	59.80	61.70	41.40

1. Heavy fog, lake frozen over. (M.)
2. Ice all gone, bay clear. (M.)
3. Ferry stops running, bay frozen. (M.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

JANUARY 1908 FEBRUARY

Date	Footnote	Local Datum			Sea-level Datum			Footnote	Local Datum			Sea-level Datum		
		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1	...	98.20	100.60	80.70	1059.80	1061.70	1041.40	...	98.20	100.50	80.50	1059.80	1061.60	1041.20
2	...	98.20	100.60	80.70	59.80	61.70	41.40	...	98.20	100.50	80.45	59.80	61.60	41.15
3	...	98.20	100.60	80.70	59.80	61.70	41.40	...	98.20	100.50	80.45	59.80	61.60	41.15
4	...	98.20	100.60	80.70	59.80	61.70	41.40	...	98.20	100.50	80.45	59.80	61.60	41.15
5	...	98.20	100.60	80.70	59.80	61.70	41.40	...	98.20	100.45	80.40	59.80	61.55	41.10
6	...	98.20	100.60	80.70	59.80	61.70	41.40	...	98.20	100.45	80.35	59.80	61.55	41.05
7	...	98.20	100.60	80.70	59.80	61.70	41.40	...	98.20	100.45	80.35	59.80	61.55	41.05
8	...	98.20	100.60	80.70	59.80	61.70	41.40	...	98.20	100.40	80.25	59.80	61.50	40.95
9	...	98.20	100.60	80.70	59.80	61.70	41.40	...	98.20	100.40	80.25	59.80	61.50	40.95
10	...	98.20	100.60	80.70	59.80	61.70	41.40	...	98.20	100.40	80.25	59.80	61.50	40.95
11	...	98.20	100.60	80.70	59.80	61.70	41.40	...	98.20	100.35	80.25	59.80	61.45	40.95
12	...	98.20	100.60	80.70	59.80	61.70	41.40	...	98.20	100.35	80.20	59.80	61.45	40.90
13	...	98.20	100.60	80.70	59.80	61.70	41.40	...	98.20	100.35	80.20	59.80	61.45	40.90
14	...	98.20	100.60	80.70	59.80	61.70	41.40	...	98.20	100.35	80.20	59.80	61.45	40.90
15	...	98.20	100.60	80.70	59.80	61.70	41.40	...	98.20	100.35	80.20	59.80	61.45	40.90
16	...	98.20	100.60	80.70	59.80	61.70	41.40	...	98.20	100.35	80.15	59.80	61.45	40.85
17	...	98.20	100.60	80.70	59.80	61.70	41.40	...	98.20	100.35	80.15	59.80	61.45	40.85
18	...	98.20	100.60	80.70	59.80	61.70	41.40	...	98.20	100.35	80.10	59.80	61.45	40.80
19	...	98.20	100.60	80.70	59.80	61.70	41.40	...	98.20	100.35	80.10	59.80	61.45	40.80
20	...	98.20	100.60	80.70	59.80	61.70	41.40	...	98.20	100.35	80.10	59.80	61.45	40.80
21	...	98.20	100.50	80.70	59.80	61.60	41.40	...	98.20	100.35	80.10	59.80	61.45	40.80
22	...	98.20	100.50	80.60	59.80	61.60	41.30	...	98.20	100.35	80.00	59.80	61.45	40.70
23	...	98.20	100.50	80.60	59.80	61.60	41.30	...	98.20	100.35	80.00	59.80	61.45	40.70
24	...	98.20	100.50	80.60	59.80	61.60	41.30	...	98.20	100.35	80.00	59.80	61.45	40.70
25	...	98.20	100.50	80.55	59.80	61.60	41.25	...	98.20	100.30	79.90	59.80	61.40	40.60
26	...	98.20	100.50	80.55	59.80	61.60	41.25	...	98.20	100.30	79.90	59.80	61.40	40.60
27	...	98.20	100.50	80.55	59.80	61.60	41.25	...	98.20	100.30	79.80	59.80	61.40	40.50
28	...	98.20	100.50	80.50	59.80	61.60	41.20	...	98.20	100.30	79.80	59.80	61.40	40.50
29	...	98.20	100.50	80.50	59.80	61.60	41.20	...	98.20	100.30	79.70	59.80	61.40	40.40
30	...	98.20	100.50	80.50	59.80	61.60	41.20	...						
31	...	98.20	100.50	80.50	59.80	61.60	41.20	...						

MARCH 1908 APRIL

1	...	98.20	100.30	79.70	1059.80	1061.40	1040.40	...	98.10	99.80	79.65	1059.70	1060.90	1040.35
2	...	98.10	100.30	79.70	59.70	61.40	40.40	...	98.10	99.80	79.65	59.70	60.90	40.35
3	...	98.10	100.30	79.70	59.70	61.40	40.40	...	98.10	99.80	79.60	59.70	60.90	40.30
4	...	98.10	100.25	79.80	59.70	61.35	40.50	...	98.10	99.85	79.60	59.70	60.95	40.30
5	...	98.00	100.25	79.80	59.60	61.35	40.50	...	98.10	99.85	79.60	59.70	60.95	40.30
6	...	a 98.00	100.20	79.85	59.60	61.30	40.55	...	b 98.05	99.85	79.70	59.65	60.95	40.40
7	...	a 98.00	100.20	79.85	59.60	61.30	40.55	...	98.00	99.80	79.70	59.60	60.90	40.40
8	...	a 98.00	100.20	79.95	59.60	61.30	40.65	...	98.00	99.80	79.70	59.60	60.90	40.40
9	...	a 98.00	100.20	79.95	59.60	61.30	40.65	...	97.90	99.80	79.65	59.50	60.90	40.35
10	...	a 98.00	100.15	80.00	59.60	61.25	40.70	...	97.90	99.80	79.60	59.50	60.90	40.30
11	...	a 98.00	100.10	a 80.00	59.60	61.20	40.70	...	97.90	99.80	79.60	59.50	60.90	40.30
12	...	a 98.00	100.10	a 80.00	59.60	61.20	40.70	...	97.90	99.80	79.60	59.50	60.90	40.30
13	...	a 98.00	b 100.05	79.95	59.60	61.15	40.65	...	97.90	99.80	79.60	59.50	60.90	40.30
14	...	a 98.00	b 100.05	79.95	59.60	61.15	40.65	...	97.90	99.90	79.60	59.50	61.00	40.30
15	...	a 98.00	b 100.05	79.90	59.60	61.15	40.60	...	97.95	99.90	79.60	59.55	61.00	40.30
16	...	98.00	100.00	79.90	59.60	61.10	40.60	...	97.90	99.80	79.60	59.50	60.90	40.30
17	...	98.00	100.00	79.90	59.60	61.10	40.60	...	97.90	99.80	79.60	59.50	60.90	40.30
18	...	b 98.05	100.00	79.90	59.65	61.10	40.60	...	97.90	99.80	79.60	59.50	60.90	40.30
19	...	b 98.05	100.00	79.85	59.65	61.10	40.55	...	97.90	99.80	79.60	59.50	60.90	40.30
20	...	b 98.05	100.00	79.85	59.65	61.10	40.55	...	97.90	99.75	79.60	59.50	60.85	40.30
21	...	98.10	99.95	79.85	59.70	61.05	40.55	...	97.85	99.75	79.60	59.45	60.85	40.30
22	...	98.10	99.95	79.80	59.70	61.05	40.50	...	97.85	99.75	79.60	59.45	60.85	40.30
23	...	98.10	99.95	79.80	59.70	61.05	40.50	...	97.85	99.70	79.60	59.45	60.80	40.30
24	...	98.10	99.90	79.75	59.70	61.00	40.45	...	97.85	99.70	79.60	59.45	60.80	40.30
25	...	98.10	99.90	79.75	59.70	61.00	40.45	...	97.90	99.75	79.60	59.50	60.85	40.30
26	...	98.10	99.90	79.75	59.70	61.00	40.45	...	97.90	99.75	79.65	59.50	60.85	40.35
27	...	98.10	99.90	79.70	59.70	61.00	40.40	...	97.90	99.75	79.65	59.50	60.85	40.35
28	...	98.10	99.85	79.70	59.70	60.95	40.40	...	97.90	99.80	79.65	59.50	60.90	40.35
29	...	98.10	99.85	79.70	59.70	60.95	40.40	...	97.90	99.80	79.65	59.50	60.90	40.35
30	...	98.10	99.85	79.70	59.70	60.95	40.40	...	97.90	99.85	79.65	59.50	60.95	40.35
31	...	98.10	99.85	79.65	59.70	60.95	40.35	...						

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	Footnote	May 1908 Local Datum Above Dam	Local Datum Lake	Local Datum Tail Water	Sea-level Datum Above Dam	Sea-level Datum Lake	Sea-level Datum Tail Water	Footnote	June 1908 Local Datum Above Dam	Local Datum Lake	Local Datum Tail Water	Sea-level Datum Above Dam	Sea-level Datum Lake	Sea-level Datum Tail Water
1	...	97.90	99.80	79.60	1059.50	1060.90	1040.30	...	97.20	100.00	81.50	1058.80	1061.10	1042.20
2	...	97.90	99.80	79.60	59.50	60.90	40.30	...	97.20	100.10	81.50	58.80	61.20	42.20
3	...	97.90	99.70	79.70	59.50	60.80	40.40	...	97.00	100.20	81.60	58.60	61.30	42.30
4	...	97.90	99.70	79.70	59.50	60.80	40.40	...	97.00	100.10	81.70	58.60	61.20	42.40
5	...	97.90	99.80	79.70	59.50	60.90	40.40	...	96.80	100.20	82.00	58.40	61.30	42.70
6	...	97.90	99.80	79.70	59.50	60.90	40.40	...	96.80	100.30	82.50	58.40	61.40	43.20
7	...	97.90	99.90	79.65	59.50	61.00	40.35	...	96.70	100.30	82.50	58.30	61.40	43.20
8	...	97.85	99.95	79.70	59.45	61.05	40.40	...	96.70	100.20	82.40	58.30	61.30	43.10
9	...	97.85	99.95	79.70	59.45	61.05	40.40	...	96.70	100.00	82.40	58.30	61.10	43.10
10	...	97.85	99.95	79.75	59.45	61.05	40.45	...	96.80	100.20	82.40	58.40	61.30	43.10
11	...	97.80	100.00	79.85	59.40	61.10	40.55	...	96.80	100.20	82.50	58.40	61.30	43.20
12	...	97.80	100.00	79.90	59.40	61.10	40.60	...	96.70	100.00	82.70	58.30	61.10	43.40
13	...	97.70	100.00	80.15	59.30	61.10	40.85	...	96.75	100.10	82.70	58.35	61.20	43.40
14	...	97.60	100.00	80.25	59.20	61.10	40.95	...	96.70	100.10	82.80	58.30	61.20	43.50
15	...	97.60	100.00	80.30	59.20	61.10	41.00	...	96.70	100.10	82.60	58.30	61.20	43.30
16	...	97.60	100.00	80.30	59.20	61.10	41.00	...	96.75	100.20	82.50	58.35	61.30	43.20
17	...	97.60	100.00	80.30	59.20	61.10	41.00	...	96.70	100.20	82.50	58.30	61.30	43.20
18	...	97.60	100.00	80.40	59.20	61.10	41.10	...	96.80	100.20	82.40	58.40	61.30	43.10
19	...	97.60	99.90	80.50	59.20	61.00	41.20	...	96.80	100.20	82.40	58.40	61.30	43.10
20	...	97.60	99.80	80.60	59.20	60.90	41.30	...	96.80	100.30	82.40	58.40	61.40	43.10
21	...	97.60	99.80	80.60	59.20	60.90	41.30	...	96.80	100.30	82.30	58.40	61.40	43.00
22	...	97.60	99.90	80.70	59.20	61.00	41.40	...	96.80	100.20	82.30	58.40	61.30	43.00
23	...	97.60	100.00	80.70	59.20	61.10	41.40	...	96.80	100.20	82.30	58.40	61.30	43.00
24	...	97.60	100.00	80.70	59.20	61.10	41.40	...	96.80	100.20	82.30	58.40	61.30	43.00
25	...	97.60	100.10	80.70	59.20	61.20	41.40	...	96.80	100.40	82.30	58.40	61.50	43.00
26	...	97.45	100.00	80.90	59.05	61.10	41.60	...	96.80	100.20	82.20	58.40	61.30	42.90
27	...	97.25	100.00	81.10	58.85	61.10	41.80	...	96.80	100.30	82.20	58.40	61.40	42.90
28	...	97.20	99.90	81.20	58.80	61.00	41.90	...	96.80	100.30	82.20	58.40	61.40	42.90
29	...	97.20	99.90	81.40	58.80	61.00	42.10	...	96.80	100.20	82.20	58.40	61.30	42.90
30	...	97.20	99.90	81.45	58.80	61.00	42.15	...	96.80	100.20	82.20	58.40	61.30	42.90
31	...	97.20	99.90	81.50	58.80	61.00	42.20	...						

Date	Footnote	July 1908 Local Datum Above Dam	Local Datum Lake	Local Datum Tail Water	Sea-level Datum Above Dam	Sea-level Datum Lake	Sea-level Datum Tail Water	Footnote	August 1908 Local Datum Above Dam	Local Datum Lake	Local Datum Tail Water	Sea-level Datum Above Dam	Sea-level Datum Lake	Sea-level Datum Tail Water
1	...	96.80	100.10	82.20	1058.40	1061.20	1042.90	...	96.60	99.70	81.40	1058.20	1060.80	1042.10
2	...	96.80	100.30	82.10	58.40	61.40	42.80	...	96.50	99.70	81.40	58.10	60.80	42.10
3	...	96.80	100.20	82.10	58.40	61.30	42.80	...	96.50	99.80	81.35	58.10	60.90	42.05
4	...	96.80	100.50	82.00	58.40	61.60	42.70	...	96.50	99.70	81.40	58.10	60.80	42.10
5	...	96.80	100.30	82.00	58.40	61.40	42.70	...	96.50	99.65	81.30	58.10	60.75	42.00
6	...	96.70	100.00	82.10	58.30	61.10	42.80	...	96.50	99.70	81.30	58.10	60.80	42.00
7	...	96.70	100.00	82.10	58.30	61.10	42.80	...	96.50	99.80	81.20	58.10	60.90	41.90
8	...	96.70	100.15	82.20	58.30	61.25	42.90	...	96.60	99.90	81.30	58.20	61.00	42.00
9	...	96.80	100.30	82.00	58.40	61.40	42.70	...	96.60	99.80	81.30	58.20	60.90	42.00
10	...	96.80	100.30	82.10	58.40	61.40	42.80	...	96.50	99.70	81.20	58.10	60.80	41.90
11	...	96.80	100.00	82.10	58.40	61.10	42.80	...	96.50	99.60	81.15	58.10	60.70	41.85
12	...	96.70	99.90	82.00	58.30	61.00	42.70	...	96.50	99.60	81.15	58.10	60.70	41.85
13	...	96.70	99.90	81.90	58.30	61.00	42.60	...	96.50	99.50	81.10	58.10	60.60	41.80
14	...	96.70	99.80	81.90	58.30	60.90	42.60	...	96.50	99.55	81.15	58.10	60.65	41.85
15	...	96.70	99.80	81.80	58.30	60.90	42.50	...	96.50	99.60	81.15	58.10	60.70	41.85
16	...	96.70	99.90	81.80	58.30	61.00	42.50	...	96.50	99.40	81.10	58.10	60.50	41.80
17	...	96.70	99.80	81.70	58.30	60.90	42.40	...	96.50	99.40	81.20	58.10	60.50	41.90
18	...	96.60	99.80	81.70	58.20	60.90	42.40	...	96.50	99.50	81.20	58.10	60.60	41.90
19	...	96.60	99.85	81.70	58.20	60.95	42.40	...	96.60	99.50	81.30	58.20	60.60	42.00
20	...	96.60	100.00	81.75	58.20	61.10	42.45	...	96.60	99.40	81.20	58.20	60.50	41.90
21	...	96.60	100.00	81.80	58.20	61.10	42.50	...	96.80	99.50	81.10	58.40	60.60	41.80
22	...	96.60	99.90	81.60	58.20	61.00	42.30	...	96.80	99.50	81.10	58.40	60.60	41.80
23	...	96.60	99.90	81.60	58.20	61.00	42.30	...	96.80	99.30	81.00	58.40	60.40	41.70
24	...	96.60	99.80	81.60	58.20	60.90	42.30	...	96.90	99.30	81.00	58.50	60.40	41.70
25	...	96.60	99.90	81.70	58.20	61.00	42.40	...	97.20	99.40	81.00	58.80	60.50	41.70
26	...	96.60	99.85	81.60	58.20	60.95	42.30	...	97.20	99.50	80.90	58.80	60.60	41.60
27	...	96.60	99.80	81.50	58.20	60.90	42.20	...	97.40	99.30	80.90	59.00	60.40	41.60
28	...	96.60	99.80	81.50	58.20	60.90	42.20	...	97.50	99.40	80.80	59.10	60.50	41.50
29	...	96.60	99.90	81.50	58.20	61.00	42.20	...	97.50	99.40	80.90	59.10	60.50	41.60
30	...	96.60	99.80	81.50	58.20	60.90	42.20	...	97.50	99.40	80.90	59.10	60.50	41.60
31	...	96.60	99.80	81.50	58.20	60.90	42.20	...	97.50	99.50	80.80	59.10	60.60	41.50

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—KEEWATIN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	Footnote	SEPTEMBER 1908 Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water	Footnote	OCTOBER Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water
1	1	97.60	99.40	80.70	1059.20	1060.50	.....	...	98.20	99.30	79.70	1059.80	1060.40	1040.00
2	...	97.80	99.50	80.70	59.40	60.60	.....	...	98.20	99.20	79.70	59.80	60.30	40.00
3	...	97.90	99.50	80.60	59.50	60.60	.....	...	98.20	99.10	79.60	59.80	60.20	39.90
4	...	98.10	99.40	80.60	59.70	60.50	.....	...	98.20	99.10	79.60	59.80	60.20	39.90
5	...	98.10	99.50	80.50	59.70	60.60	.....	...	98.20	99.30	79.70	59.80	60.40	40.00
6	...	98.20	99.50	80.50	59.80	60.60	.....	...	98.20	99.20	79.60	59.80	60.30	39.90
7	...	98.20	99.40	80.50	59.80	60.50	.....	...	98.20	99.10	79.40	59.80	60.20	39.70
8	...	98.20	99.40	80.40	59.80	60.50	.....	...	98.20	99.30	79.30	59.80	60.40	39.60
9	...	98.20	99.50	80.40	59.80	60.60	.....	...	98.20	99.10	79.40	59.80	60.20	39.70
10	...	98.20	99.40	80.40	59.80	60.50	.....	...	98.00	98.60	79.40	59.60	59.70	39.70
11	...	98.30	99.50	80.30	59.90	60.60	.....	...	98.10	99.00	79.40	59.70	60.10	39.70
12	...	98.30	99.50	80.30	59.90	60.60	.....	...	98.20	99.00	79.30	59.80	60.10	39.60
13	...	98.30	99.60	80.20	59.90	60.70	.....	...	98.00	99.00	c 78.00	59.60	60.10	.....
14	...	98.30	99.50	80.20	59.90	60.60	.....	...	98.40	98.90	78.90	60.00	60.00	39.20
15	...	98.30	99.60	80.10	59.90	60.70	.....	...	98.50	98.90	78.80	60.10	60.00	39.10
16	...	98.30	99.50	80.10	59.90	60.60	1040.40	...	98.40	98.80	78.60	60.00	59.90	38.90
17	...	98.30	99.50	80.10	59.90	60.60	40.40	...	98.40	98.90	78.70	60.00	60.00	39.00
18	...	98.30	99.40	80.20	59.90	60.50	40.50	...	98.40	99.00	78.70	60.00	60.10	39.00
19	...	98.20	99.30	80.10	59.80	60.40	40.40	...	98.40	99.00	78.60	60.00	60.10	38.90
20	...	98.20	99.50	80.00	59.80	60.60	40.30	...	98.40	99.10	78.60	60.00	60.20	38.90
21	...	98.25	99.40	80.00	59.85	60.50	40.30	...	98.40	99.10	78.60	60.00	60.20	38.90
22	...	98.30	99.50	80.10	59.90	60.60	40.40	...	98.45	99.00	78.70	60.05	60.10	39.00
23	...	98.30	99.30	80.00	59.90	60.40	40.30	...	98.45	98.90	78.70	60.05	60.00	39.00
24	...	98.20	99.10	79.90	59.80	60.20	40.20	...	98.40	98.80	78.70	60.00	59.90	39.00
25	...	98.20	99.20	79.90	59.80	60.30	40.20	...	98.40	98.80	78.60	60.00	59.90	38.90
26	...	98.20	99.20	79.80	59.80	60.30	40.10	...	98.40	98.90	78.50	60.00	60.00	38.80
27	...	98.20	99.30	79.80	59.80	60.40	40.10	...	98.40	99.00	78.50	60.00	60.10	38.80
28	...	98.20	99.20	79.80	59.80	60.30	40.10	...	98.40	98.80	78.50	60.00	59.90	38.80
29	...	98.20	99.30	79.90	59.80	60.40	40.20	...	98.40	99.00	78.40	60.00	60.10	38.70
30	...	98.20	99.30	79.90	59.80	60.40	40.20	...	98.40	98.80	78.40	60.00	59.90	38.70
31	...	.....	.....	.....	.....	.....	.....	...	98.40	98.80	78.40	60.00	59.90	38.70

Date	Footnote	NOVEMBER 1908 Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water	Footnote	DECEMBER Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water
1	...	98.40	99.00	78.30	1060.00	1060.10	1038.60	3	98.50	98.70	77.10	1060.10	1059.80	1037.40
2	...	98.40	99.00	78.30	60.00	60.10	38.60	...	98.50	98.70	77.10	60.10	59.80	37.40
3	...	98.40	98.90	78.25	60.00	60.00	38.55	...	98.45	98.70	77.00	60.05	59.80	37.30
4	...	98.30	98.80	78.25	59.90	59.90	38.55	...	98.45	98.80	77.00	60.05	59.90	37.30
5	...	98.30	98.90	78.20	59.90	60.00	38.50	...	98.40	98.80	77.00	60.00	59.90	37.30
6	...	98.30	98.80	78.20	59.90	59.90	38.50	...	98.40	98.80	77.00	60.00	59.90	37.30
7	...	98.30	98.70	78.20	59.90	59.80	38.50	...	98.40	98.80	76.90	60.00	59.90	37.20
8	...	98.30	98.90	78.30	59.90	60.00	38.60	...	98.45	98.80	76.80	60.05	59.90	37.10
9	...	98.30	98.80	78.20	59.90	59.90	38.50	...	98.45	98.80	76.70	60.05	59.90	37.00
10	...	98.30	98.70	78.20	59.90	59.80	38.50	...	98.40	98.80	76.80	60.00	59.90	37.10
11	...	98.30	98.70	78.10	59.90	59.80	38.40	...	98.40	98.80	76.70	60.00	59.90	37.00
12	...	98.30	98.80	78.10	59.90	59.90	38.40	...	98.40	98.80	76.70	60.00	59.90	37.00
13	...	98.30	98.60	78.10	59.90	59.70	38.40	...	98.40	98.80	76.60	60.00	59.90	36.90
14	...	98.30	98.60 b	78.05	59.90	59.70	38.35	...	98.40	98.75	76.60	60.00	59.85	36.90
15	...	98.30	98.50	78.00	59.90	59.60	38.30	...	98.40	98.75	76.60	60.00	59.85	36.90
16	...	98.40	98.70	77.80	60.00	59.80	38.10	...	98.40	98.75	76.60	60.00	59.85	36.90
17	...	98.60	98.80	77.60	60.20	59.90	37.90	...	98.40	98.70	76.60	60.00	59.80	36.90
18	...	98.80	98.60	77.50	60.40	59.70	37.80	...	98.30	98.70	76.70	59.90	59.80	37.00
19	...	98.80	98.70	77.30	60.40	59.80	37.60	...	98.30	98.70	76.50	59.90	59.80	36.80
20	...	98.70	98.70	77.30	60.30	59.80	37.60	...	98.30	98.70	76.50	59.90	59.80	36.80
21	...	98.70	98.70	77.30	60.30	59.80	37.60	...	98.30	98.70	76.60	59.90	59.80	36.90
22	...	98.70	98.70	77.20	60.30	59.80	37.50	...	98.30	98.70	76.60	59.90	59.80	36.90
23	...	98.60	98.60	77.20	60.20	59.70	37.50	...	98.30	98.70	76.60	59.90	59.80	36.90
24	...	98.60	98.60	77.20	60.20	59.70	37.50	...	98.30	98.70	76.60	59.90	59.80	36.90
25	...	98.60	98.60	77.20	60.20	59.70	37.50	...	98.30	98.70	76.60	59.90	59.80	36.90
26	...	98.60	98.60	77.30	60.20	59.70	37.60	...	98.30	98.70	76.60	59.90	59.80	36.90
27	...	98.60	98.70	77.20	60.20	59.80	37.50	...	98.30	98.70	76.60	59.90	59.80	36.90
28	...	98.60	98.70	77.20	60.20	59.80	37.50	...	98.30	98.70	76.60	59.90	59.80	36.90
29	...	98.60	98.70	77.20	60.20	59.80	37.50	...	98.30	98.70	76.60	59.90	59.80	36.90
30	2	98.60	98.70	77.20	60.20	59.80	37.50	...	98.30	98.70	76.60	59.90	59.80	36.90
31	...	.....	.....	.....	.....	.....	.....	...	98.30	98.70	76.60	59.90	59.80	36.90

1. During 1908 the tail water gauge was changed from Norman to Keewatin. The exact date of the change is not known but the gauge records indicate that it occurred between Sept. 1 and Sept. 15. Reductions to sea-level are consequently omitted for this period. (Engrs.) 2. Blizzard blowing all day. Ferry stopped running 4:30 trip. (M.) 3. Lake frozen solid this a. m. (M.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—KEEWATIN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	JANUARY 1909							FEBRUARY						
	Footnote	Local Datum			Sea-level Datum			Footnote	Local Datum			Sea-level Datum		
		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1	...	98.30	98.70	76.60	1059.90	1059.80	1036.90	...	97.80	98.50	76.20	1059.40	1059.60	1036.50
2	...	98.20	98.70	76.60	59.80	59.80	36.90	...	97.80	98.50	76.20	59.40	59.60	36.50
3	...	98.20	98.65	76.60	59.80	59.75	36.90	...	97.80	98.50	76.40	59.40	59.60	36.70
4	...	98.10	98.65	76.60	59.70	59.75	36.90	...	97.80	98.50	76.40	59.40	59.60	36.70
5	...	98.10	98.60	76.50	59.70	59.70	36.80	...	97.80	98.50	76.40	59.40	59.60	36.70
6	...	98.10	98.60	76.50	59.70	59.70	36.80	...	97.80	98.50	76.30	59.40	59.60	36.60
7	...	98.00	98.60	76.50	59.60	59.70	36.80	...	97.80	98.50	76.30	59.40	59.60	36.60
8	...	98.00	98.60	76.50	59.60	59.70	36.80	...	97.80	98.50	76.30	59.40	59.60	36.60
9	...	98.00	98.60	76.50	59.60	59.70	36.80	...	97.80	98.50	76.30	59.40	59.60	36.60
10	...	98.00	98.60	76.50	59.60	59.70	36.80	...	97.80	98.50	76.30	59.40	59.60	36.60
11	...	98.00	98.60	76.50	59.60	59.70	36.80	...	97.80	98.50	76.30	59.40	59.60	36.60
12	...	98.00	98.60	76.50	59.60	59.70	36.80	...	97.80	98.50	76.30	59.40	59.60	36.60
13	...	98.00	98.60	76.50	59.60	59.70	36.80	...	97.80	98.50	76.30	59.40	59.60	36.60
14	...	98.00	98.60	76.50	59.60	59.70	36.80	...	97.80	98.50	76.30	59.40	59.60	36.60
15	...	98.00	98.60	76.50	59.60	59.70	36.80	...	97.80	98.50	76.30	59.40	59.60	36.60
16	...	97.90	98.50	76.50	59.50	59.60	36.80	...	97.80	98.50	76.30	59.40	59.60	36.60
17	...	97.90	98.50	76.50	59.50	59.60	36.80	...	97.80	98.50	76.40	59.40	59.60	36.70
18	...	97.90	98.50	76.50	59.50	59.60	36.80	...	97.80	98.40	76.40	59.40	59.50	36.70
19	...	97.90	98.50	76.40	59.50	59.60	36.70	...	97.80	98.40	76.50	59.40	59.50	36.80
20	...	97.80	98.50	76.30	59.40	59.60	36.60	...	97.80	98.40	76.50	59.40	59.50	36.80
21	...	97.80	98.50	76.30	59.40	59.60	36.60	...	97.80	98.40	76.50	59.40	59.50	36.80
22	...	97.80	98.50	76.30	59.40	59.60	36.60	...	97.80	98.30	76.50	59.40	59.40	36.80
23	...	97.80	98.50	76.30	59.40	59.60	36.60	...	97.80	98.30	76.50	59.40	59.40	36.80
24	...	97.80	98.50	76.30	59.40	59.60	36.60	...	97.60	98.30	76.50	59.20	59.40	36.80
25	...	97.80	98.50	76.20	59.40	59.60	36.50	...	97.60	98.30	76.50	59.20	59.40	36.80
26	...	97.80	98.50	76.20	59.40	59.60	36.50	...	97.50	98.30	76.60	59.10	59.40	36.90
27	...	97.80	98.50	76.20	59.40	59.60	36.50	...	97.50	98.30	76.60	59.10	59.40	36.90
28	...	97.80	98.50	76.20	59.40	59.60	36.50	...	97.50	98.30	76.60	59.10	59.40	36.90
29	...	97.80	98.50	76.20	59.40	59.60	36.50	...						
30	...	97.80	98.50	76.20	59.40	59.60	36.50	...						
31	...	97.80	98.50	76.20	59.40	59.60	36.50	...						

	MARCH 1909							APRIL						
1	...	97.50	98.20	76.60	1059.10	1059.30	1036.90	...	97.00	98.00	76.90	1058.60	1059.10	1037.20
2	...	97.40	98.20	76.60	59.00	59.30	36.90	...	97.00	98.00	76.80	58.60	59.10	37.10
3	...	97.40	98.20	76.70	59.00	59.30	37.00	...	97.00	98.00	76.80	58.60	59.10	37.10
4	...	97.30	98.10	76.70	58.90	59.20	37.00	...	97.00	98.00	76.80	58.60	59.10	37.10
5	...	97.30	98.10	76.70	58.90	59.20	37.00	...	97.00	98.00	76.80	58.60	59.10	37.10
6	...	97.30	98.10	76.70	58.90	59.20	37.00	...	97.00	98.00	76.80	58.60	59.10	37.10
7	...	97.30	98.00	76.70	58.90	59.10	37.00	...	97.00	98.00	76.80	58.60	59.10	37.10
8	...	97.30	98.00	76.70	58.90	59.10	37.00	...	97.00	98.00	76.70	58.60	59.10	37.00
9	...	97.30	98.00	76.80	58.90	59.10	37.10	...	97.00	98.00	76.70	58.60	59.10	37.00
10	...	97.30	98.00	76.80	58.90	59.10	37.10	...	97.00	98.00	76.70	58.60	59.10	37.00
11	...	97.20	98.00	76.80	58.80	59.10	37.10	...	97.00	98.00	76.80	58.60	59.10	37.10
12	...	97.20	98.00	76.70	58.80	59.10	37.00	...	97.00	98.00	76.80	58.60	59.10	37.10
13	...	97.20	98.00	76.70	58.80	59.10	37.00	...	97.00	98.00	76.80	58.60	59.10	37.10
14	...	97.20	98.00	76.80	58.80	59.10	37.10	...	97.00	98.00	76.80	58.60	59.10	37.10
15	...	97.20	98.00	76.80	58.80	59.10	37.10	...	97.00	98.00	76.80	58.60	59.10	37.10
16	...	97.20	98.00	76.80	58.80	59.10	37.10	...	97.00	98.00	76.80	58.60	59.10	37.10
17	...	97.10	98.00	76.80	58.70	59.10	37.10	...	97.00	98.00	76.70	58.60	59.10	37.00
18	...	97.10	98.00	76.80	58.70	59.10	37.10	...	97.00	98.00	76.70	58.60	59.10	37.00
19	...	97.10	98.00	76.80	58.70	59.10	37.10	...	97.00	97.90	76.60	58.60	59.00	36.90
20	...	97.10	98.00	76.80	58.70	59.10	37.10	...	97.00	97.90	76.60	58.60	59.00	36.90
21	...	97.00	98.00	76.90	58.60	59.10	37.20	...	97.00	97.90	76.60	58.60	59.00	36.90
22	...	97.00	98.00	76.90	58.60	59.10	37.20	...	97.00	97.90	76.60	58.60	59.00	36.90
23	...	97.00	98.00	76.90	58.60	59.10	37.20	...	97.00	97.90	76.60	58.60	59.00	36.90
24	...	97.00	98.00	76.90	58.60	59.10	37.20	...	97.00	97.80	76.60	58.60	58.90	36.90
25	...	97.00	98.00	76.90	58.60	59.10	37.20	...	97.00	97.80	76.50	58.60	58.90	36.80
26	...	97.00	98.00	76.90	58.60	59.10	37.20	...	97.00	97.80	76.50	58.60	58.90	36.80
27	...	97.00	98.00	76.90	58.60	59.10	37.20	...	97.00	97.70	76.50	58.60	58.80	36.80
28	...	97.00	98.00	76.90	58.60	59.10	37.20	...	97.00	97.70	76.40	58.60	58.80	36.70
29	...	97.00	98.00	76.90	58.60	59.10	37.20	...	97.00	97.60	76.40	58.60	58.70	36.70
30	...	97.00	98.00	76.90	58.60	59.10	37.20	...	97.00	97.60	76.40	58.60	58.70	36.70
31	...	97.00	98.00	76.90	58.60	59.10	37.20	...						

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—KEEWATIN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

MAY 1909

Date	Footnote	Local Datum			Sea-level Datum			Footnote
		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water	
1	...	97.00	97.50	76.40	1058.60	1058.60	1036.70	...
2	...	97.00	97.50	76.50	58.60	58.60	36.80	...
3	...	97.00	97.50	76.50	58.60	58.60	36.80	...
4	...	97.00	97.60	76.50	58.60	58.70	36.80	...
5	...	97.00	97.60	76.60	58.60	58.70	36.90	...
6	...	96.90	97.60	76.60	58.50	58.70	36.90	...
7	...	96.90	97.60	76.70	58.50	58.70	37.00	...
8	...	96.90	97.70	76.60	58.50	58.80	36.90	...
9	...	96.90	97.70	76.60	58.50	58.80	36.90	...
10	...	96.90	97.60	76.60	58.50	58.70	36.90	...
11	...	96.90	97.60	76.70	58.50	58.70	37.00	...
12	...	96.90	97.60	76.70	58.50	58.70	37.00	...
13	...	96.90	97.60	76.70	58.50	58.70	37.00	...
14	...	96.90	97.70	76.70	58.50	58.80	37.00	...
15	...	96.90	97.70	76.70	58.50	58.80	37.00	...
16	...	96.90	97.70	76.70	58.50	58.80	37.00	...
17	...	97.00	97.80	76.80	58.60	58.90	37.10	...
18	...	97.00	97.80	76.80	58.60	58.90	37.10	...
19	...	97.00	97.80	76.90	58.60	58.90	37.20	...
20	...	97.00	97.90	77.00	58.60	59.00	37.30	...
21	...	97.00	98.00	77.00	58.60	59.10	37.30	...
22	...	97.00	98.00	77.00	58.60	59.10	37.30	...
23	...	97.00	98.00	77.00	58.60	59.10	37.30	...
24	...	97.00	98.20	77.10	58.60	59.30	37.40	...
25	...	97.00	98.20	77.20	58.60	59.30	37.50	...
26	...	97.00	98.20	77.10	58.60	59.30	37.40	...
27	...	97.00	98.10	77.10	58.60	59.20	37.40	...
28	...	97.00	98.20	77.10	58.60	59.30	37.40	...
29	...	97.00	98.20	77.20	58.60	59.30	37.50	...
30	...	97.00	98.20	77.20	58.60	59.30	37.50	...
31	...	a 97.00	98.30	77.20	58.60	59.40	37.50	...

JUNE 1909

Date	Footnote	Local Datum			Sea-level Datum			Footnote
		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water	
1	...	97.00	98.20	77.20	1058.60	1059.30	1037.50	...
2	...	97.00	98.20	77.30	58.60	59.30	37.60	...
3	...	97.00	98.20	77.30	58.60	59.30	37.60	...
4	...	97.00	98.20	77.30	58.60	59.30	37.60	...
5	...	97.00	98.30	77.20	58.60	59.40	37.50	...
6	...	97.00	98.30	77.20	58.60	59.40	37.50	...
7	...	97.00	98.20	77.30	58.60	59.30	37.60	...
8	...	97.00	98.20	77.30	58.60	59.30	37.60	...
9	...	97.00	98.20	77.30	58.60	59.30	37.60	...
10	...	97.00	98.20	77.20	58.60	59.30	37.50	...
11	...	97.00	98.20	77.10	58.60	59.30	37.40	...
12	...	96.90	98.20	77.10	58.50	59.30	37.40	...
13	...	96.90	98.20	77.10	58.50	59.30	37.40	...
14	...	96.90	98.30	77.20	58.50	59.40	37.50	...
15	...	96.90	98.30	77.20	58.50	59.40	37.50	...
16	...	96.90	98.30	77.20	58.50	59.40	37.50	...
17	...	96.90	98.30	77.20	58.50	59.40	37.50	...
18	...	96.90	98.30	77.20	58.50	59.40	37.50	...
19	...	96.90	98.40	77.30	58.50	59.50	37.60	...
20	...	96.90	98.60	77.30	58.50	59.70	37.60	...
21	...	96.90	98.50	77.20	58.50	59.60	37.50	...
22	...	96.90	98.50	77.20	58.50	59.60	37.50	...
23	...	96.90	98.40	77.30	58.50	59.50	37.60	...
24	...	96.90	98.40	77.30	58.50	59.50	37.60	...
25	...	96.90	98.40	77.30	58.50	59.50	37.60	...
26	...	96.90	98.50	77.20	58.50	59.60	37.50	...
27	...	96.90	98.50	77.20	58.50	59.60	37.50	...
28	...	96.90	98.50	77.30	58.50	59.60	37.60	...
29	...	96.90	98.50	77.30	58.50	59.60	37.60	...
30	...	96.90	98.50	77.30	58.50	59.60	37.60	...
31	...							

JULY 1909

Date	Footnote	Local Datum			Sea-level Datum			Footnote
		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water	
1	...	96.90	98.60	77.30	1058.50	1059.70	1037.60	...
2	...	96.90	98.60	77.30	58.50	59.70	37.60	...
3	...	96.90	98.60	77.30	58.50	59.70	37.60	...
4	...	96.90	98.70	77.30	58.50	59.80	37.60	...
5	...	96.90	98.70	77.30	58.50	59.80	37.60	...
6	...	96.90	98.50	77.20	58.50	59.60	37.50	...
7	...	96.90	98.60	77.20	58.50	59.70	37.50	...
8	...	96.90	98.60	77.30	58.50	59.70	37.60	...
9	...	96.90	98.60	77.30	58.50	59.70	37.60	...
10	...	96.90	98.70	77.30	58.50	59.80	37.60	...
11	...	96.90	98.70	77.30	58.50	59.80	37.60	...
12	...	96.90	98.70	77.30	58.50	59.80	37.60	...
13	...	96.90	98.70	77.30	58.50	59.80	37.60	...
14	...	96.90	98.70	77.30	58.50	59.80	37.60	...
15	...	96.90	98.70	77.30	58.50	59.80	37.60	...
16	...	96.90	98.80	77.30	58.50	59.90	37.60	...
17	...	96.90	98.70	77.30	58.50	59.80	37.60	...
18	...	96.90	98.70	77.30	58.50	59.80	37.60	...
19	...	96.90	98.80	77.30	58.50	59.90	37.60	...
20	...	96.90	98.80	77.30	58.50	59.90	37.60	...
21	...	96.90	98.80	77.30	58.50	59.90	37.60	...
22	...	96.90	98.80	77.30	58.50	59.90	37.60	...
23	...	96.90	98.80	77.30	58.50	59.90	37.60	...
24	...	96.90	98.70	77.30	58.50	59.80	37.60	...
25	...	96.90	98.70	77.30	58.50	59.80	37.60	...
26	...	96.90	98.70	77.30	58.50	59.80	37.60	...
27	...	96.90	98.70	77.30	58.50	59.80	37.60	...
28	...	96.90	98.70	77.30	58.50	59.80	37.60	...
29	...	97.00	98.80	77.30	58.60	59.90	37.60	...
30	...	97.00	98.80	77.30	58.60	59.90	37.60	...
31	...	97.00	98.70	77.30	58.60	59.80	37.60	...

AUGUST 1909

Date	Footnote	Local Datum			Sea-level Datum			Footnote
		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water	
1	...	97.10	98.80	77.30	1058.70	1059.90	1037.60	...
2	...	97.10	98.80	77.30	58.70	59.90	37.60	...
3	...	97.00	98.70	77.30	58.60	59.80	37.60	...
4	...	97.00	98.70	77.20	58.60	59.80	37.50	...
5	...	97.10	98.70	77.20	58.70	59.80	37.50	...
6	...	97.10	98.80	77.20	58.70	59.90	37.50	...
7	...	97.10	98.80	77.20	58.70	59.90	37.50	...
8	...	97.10	98.70	77.10	58.70	59.80	37.40	...
9	...	97.10	98.70	77.20	58.70	59.80	37.50	...
10	...	97.10	98.70	77.20	58.70	59.80	37.50	...
11	...	97.10	98.70	77.30	58.70	59.80	37.60	...
12	...	97.10	98.80	77.20	58.70	59.90	37.50	...
13	...	97.10	98.80	77.10	58.70	59.90	37.40	...
14	...	97.10	98.80	77.20	58.70	59.90	37.50	...
15	...	97.10	98.80	77.20	58.70	59.90	37.50	...
16	...	97.10	98.80	77.20	58.70	59.90	37.50	...
17	...	97.10	98.90	77.30	58.70	60.00	37.60	...
18	...	97.10	98.90	77.30	58.70	60.00	37.60	...
19	...	97.20	98.70	77.30	58.80	59.80	37.60	...
20	...	97.10	98.80	77.20	58.70	59.90	37.50	...
21	...	97.10	98.80	77.20	58.70	59.90	37.50	...
22	...	97.20	98.90	77.20	58.80	60.00	37.50	...
23	...	97.20	99.00	77.30	58.80	60.10	37.60	...
24	...	97.20	99.00	77.30	58.80	60.10	37.60	...
25	...	97.20	99.00	77.40	58.80	60.10	37.70	...
26	...	97.20	98.80	77.40	58.80	59.90	37.70	...
27	...	97.20	98.70	77.40	58.80	59.80	37.70	...
28	...	97.20	99.00	77.30	58.80	60.10	37.60	...
29	...	97.20	99.00	77.30	58.80	60.10	37.60	...
30	...	97.20	98.70	77.20	58.80	59.80	37.50	...
31	...	97.20	98.80	77.20	58.80	59.90	37.50	...

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—KEEWATIN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	Footnote	SEPTEMBER 1909 Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water	Footnote	OCTOBER Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water
1	...	97.20	98.80	77.30	1058.80	1059.90	1037.60	...	97.40	98.80	77.40	1059.00	1059.90	1037.70
2	...	97.20	98.90	77.40	58.80	60.00	37.70	...	97.40	98.80	77.30	59.00	59.90	37.60
3	...	97.20	98.90	77.40	58.80	60.00	37.70	...	97.40	98.80	77.30	59.00	59.90	37.60
4	...	97.20	99.00	77.40	58.80	60.10	37.70	...	97.40	98.80	77.40	59.00	59.90	37.70
5	...	97.20	98.80	77.30	58.80	59.90	37.60	...	97.40	98.90	77.40	59.00	60.00	37.70
6	...	97.20	98.80	77.30	58.80	59.90	37.60	...	97.40	98.80	77.30	59.00	59.90	37.60
7	...	97.20	98.70	77.30	58.80	59.80	37.60	...	97.40	98.70	77.30	59.00	59.80	37.60
8	...	97.20	98.80	77.30	58.80	59.90	37.60	...	97.40	98.80	77.20	59.00	59.90	37.50
9	...	97.20	98.80	77.20	58.80	59.90	37.50	...	97.40	98.80	77.20	59.00	59.90	37.50
10	...	97.20	98.70	77.20	58.80	59.80	37.50	1	97.30	98.60	77.30	58.90	59.70	37.60
11	...	97.20	98.90	77.30	58.80	60.00	37.60	2	97.30	98.60	77.00	58.90	59.70	37.30
12	...	97.20	98.80	77.30	58.80	59.90	37.60	...	97.30	98.30	77.00	58.90	59.40	37.30
13	...	97.20	98.60	77.20	58.80	59.70	37.50	3	97.40	98.60	77.10	59.00	59.70	37.40
14	...	97.20	98.70	77.20	58.80	59.80	37.50	...	97.40	98.60	77.10	59.00	59.70	37.40
15	...	97.20	98.70	77.30	58.80	59.80	37.60	...	97.40	98.70	77.20	59.00	59.80	37.50
16	...	97.20	98.80	77.40	58.80	59.90	37.70	...	97.40	98.70	77.20	59.00	59.80	37.50
17	...	97.20	98.80	77.40	58.80	59.90	37.70	...	97.60	98.80	77.10	59.20	59.90	37.40
18	...	97.20	98.70	77.30	58.80	59.80	37.60	...	97.50	98.70	77.10	59.10	59.80	37.40
19	...	97.20	98.90	77.30	58.80	60.00	37.60	...	97.60	98.80	77.20	59.20	59.90	37.50
20	...	97.20	98.80	77.40	58.80	59.90	37.70	...	97.60	98.80	77.20	59.20	59.90	37.50
21	...	97.30	98.80	77.30	58.90	59.90	37.60	d	97.60	98.80	77.30	59.20	59.90	37.60
22	...	97.30	98.90	77.30	58.90	60.00	37.60	...	97.70	98.90	77.30	59.30	60.00	37.60
23	...	97.30	98.80	77.30	58.90	59.90	37.60	...	97.80	99.00	77.30	59.40	60.10	37.60
24	...	97.20	98.80	77.30	58.80	59.90	37.60	...	97.80	99.10	77.30	59.40	60.20	37.60
25	...	97.20	98.90	77.40	58.80	60.00	37.70	...	97.80	99.10	77.30	59.40	60.20	37.60
26	...	97.30	98.90	77.30	58.90	60.00	37.60	...	97.80	99.00	77.30	59.40	60.10	37.60
27	...	97.30	98.70	77.30	58.90	59.80	37.60	...	97.90	99.00	77.20	59.50	60.10	37.50
28	...	97.40	98.70	77.30	59.00	59.80	37.60	4	97.80	99.20	77.20	59.40	60.30	37.50
29	...	97.40	98.70	77.30	59.00	59.80	37.60	...	97.90	99.10	77.20	59.50	60.20	37.50
30	...	97.40	98.70	77.30	59.00	59.80	37.60	...	97.90	99.00	77.10	59.50	60.10	37.40
31	...							...	97.80	99.00	77.20	59.40	60.10	37.50
		NOVEMBER 1909							DECEMBER					
1	...	97.80	99.00	77.20	1059.40	1060.10	1037.50	...	98.10	99.00	77.20	1059.70	1060.10	1037.50
2	...	97.80	99.00	77.20	59.40	60.10	37.50	...	98.10	99.00	77.20	59.70	60.10	37.50
3	...	97.80	99.00	77.20	59.40	60.10	37.50	...	98.10	99.00	77.20	59.70	60.10	37.50
4	...	97.80	99.00	77.20	59.40	60.10	37.50	...	98.10	99.00	77.15	59.70	60.10	37.45
5	...	97.80	99.00	77.20	59.40	60.10	37.50	...	98.10	99.00	77.15	59.70	60.10	37.45
6	...	97.80	99.10	77.20	59.40	60.20	37.50	...	98.10	99.00	77.15	59.70	60.10	37.45
7	...	97.80	99.10	77.20	59.40	60.20	37.50	...	98.10	99.00	77.15	59.70	60.10	37.45
8	...	97.80	99.10	77.20	59.40	60.20	37.50	...	98.10	99.00	77.15	59.70	60.10	37.45
9	...	97.80	99.20	77.20	59.40	60.30	37.50	...	98.10	99.00	77.10	59.70	60.10	37.40
10	...	97.90	99.20	77.10	59.50	60.30	37.40	...	98.10	99.00	77.10	59.70	60.10	37.40
11	...	97.90	99.10	77.10	59.50	60.20	37.40	...	98.10	99.00	77.10	59.70	60.10	37.40
12	...	97.90	99.10	77.20	59.50	60.20	37.50	...	98.10	99.00	77.10	59.70	60.10	37.40
13	...	97.80	99.10	77.20	59.40	60.20	37.50	...	98.10	99.00	77.10	59.70	60.10	37.40
14	5	97.80	99.00	77.20	59.40	60.10	37.50	...	98.10	99.00	77.10	59.70	60.10	37.40
15	...	97.80	99.00	77.20	59.40	60.10	37.50	...	98.10	99.00	77.10	59.70	60.10	37.40
16	...	97.80	99.00	77.20	59.40	60.10	37.50	...	98.10	99.00	77.10	59.70	60.10	37.40
17	...	97.80	99.00	77.20	59.40	60.10	37.50	...	98.10	99.00	77.10	59.70	60.10	37.40
18	...	97.90	99.00	77.20	59.50	60.10	37.50	...	98.10	99.00	77.10	59.70	60.10	37.40
19	...	98.10	99.00	77.20	59.70	60.10	37.50	...	98.10	99.05	77.10	59.70	60.15	37.40
20	6	98.10	99.00	77.20	59.70	60.10	37.50	...	98.10	99.05	77.10	59.70	60.15	37.40
21	...	98.10	99.00	77.20	59.70	60.10	37.50	...	98.10	99.10	77.10	59.70	60.20	37.40
22	7	98.10	99.00	77.20	59.70	60.10	37.50	...	98.10	99.10	77.10	59.70	60.20	37.40
23	...	98.10	99.00	77.20	59.70	60.10	37.50	...	98.10	99.10	77.10	59.70	60.20	37.40
24	...	98.10	99.00	77.20	59.70	60.10	37.50	...	98.10	99.10	77.10	59.70	60.20	37.40
25	...	98.10	99.00	77.20	59.70	60.10	37.50	...	98.10	99.15	77.10	59.70	60.25	37.40
26	...	98.10	99.00	77.20	59.70	60.10	37.50	...	98.10	99.20	77.10	59.70	60.30	37.40
27	...	98.10	99.00	77.20	59.70	60.10	37.50	...	98.10	99.20	77.10	59.70	60.30	37.40
28	...	98.10	99.00	77.20	59.70	60.10	37.50	...	98.10	99.20	77.10	59.70	60.30	37.40
29	...	98.10	99.00	77.20	59.70	60.10	37.50	...	98.10	99.20	77.10	59.70	60.30	37.40
30	8	98.10	99.00	77.20	59.70	60.10	37.50	...	98.10	99.20	77.10	59.70	60.30	37.40
31	...							...	98.10	99.20	77.10	59.70	60.30	37.40

1. Strong NW. wind. (M.) 2. Strong wind, snow. (M.) 3. Strong wind, heavy sleet and snow. (M.) 4. I made an error in the 11th. It should have been 98.60, as I have it in the book. You will notice on the 12th it was 98.30, and the cause of it was from a heavy north wind. (Note sent by gauge reader to Department of Public Works, Ontario, Oct. 28) (Engrs.) 5. Snow, all day, strong wind. (M.) 6. Snow; ferry stopped running. (M.) 7. Lake frozen over. (M.) 8. Thawing all day; sleighing almost gone. Lake opening up again. (M.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—KEEWATIN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	Footnote	January 1910 — Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water	Footnote	February 1910 — Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water
1	...	98.10	99.20	77.10	1059.70	1060.30	1037.40	...	98.10	99.50	77.00	1059.70	1060.60	1037.30
2	...	98.10	99.20	77.10	59.70	60.30	37.40	...	98.10	99.50	77.05	59.70	60.60	37.35
3	...	98.10	99.20	77.10	59.70	60.30	37.40	...	98.10	99.50	77.05	59.70	60.60	37.35
4	...	98.10	99.20	77.10	59.70	60.30	37.40	...	98.10	99.55	77.05	59.70	60.65	37.35
5	...	98.10	99.20	77.10	59.70	60.30	37.40	...	98.10	99.55	77.10	59.70	60.65	37.40
6	...	98.10	99.20	77.10	59.70	60.30	37.40	...	98.10	99.55	77.10	59.70	60.65	37.40
7	...	98.10	99.20	77.10	59.70	60.30	37.40	...	98.10	99.55	77.10	59.70	60.65	37.40
8	...	98.10	99.20	77.00	59.70	60.30	37.30	...	98.10	99.60	77.10	59.70	60.70	37.40
9	...	98.10	99.20	77.00	59.70	60.30	37.30	...	98.10	99.60	77.10	59.70	60.70	37.40
10	...	98.10	99.20	77.00	59.70	60.30	37.30	...	98.10	99.60	77.10	59.70	60.70	37.40
11	...	98.10	99.20	77.00	59.70	60.30	37.30	...	98.10	99.60	77.10	59.70	60.70	37.40
12	...	98.10	99.20	77.00	59.70	60.30	37.30	...	98.10	99.60	77.10	59.70	60.70	37.40
13	...	98.10	99.20	77.00	59.70	60.30	37.30	...	98.10	99.60	77.10	59.70	60.70	37.40
14	...	98.10	99.20	77.00	59.70	60.30	37.30	...	98.10	99.60	77.10	59.70	60.70	37.40
15	...	98.10	99.20	77.00	59.70	60.30	37.30	...	98.10	99.60	77.10	59.70	60.70	37.40
16	...	98.10	99.20	77.00	59.70	60.30	37.30	...	98.10	99.60	77.10	59.70	60.70	37.40
17	...	98.10	99.20	77.00	59.70	60.30	37.30	...	98.10	99.60	77.10	59.70	60.70	37.40
18	...	98.10	99.30	77.00	59.70	60.40	37.30	...	98.10	99.60	77.10	59.70	60.70	37.40
19	...	98.10	99.30	77.00	59.70	60.40	37.30	...	98.10	99.60	77.10	59.70	60.70	37.40
20	...	98.10	99.30	77.00	59.70	60.40	37.30	...	98.10	99.65	77.10	59.70	60.75	37.40
21	...	98.10	99.30	77.00	59.70	60.40	37.30	...	98.10	99.65	77.10	59.70	60.75	37.40
22	...	98.10	99.30	77.00	59.70	60.40	37.30	...	98.10	99.65	77.10	59.70	60.75	37.40
23	...	98.10	99.35	77.00	59.70	60.45	37.30	...	98.10	99.65	77.10	59.70	60.75	37.40
24	...	98.10	99.35	77.00	59.70	60.45	37.30	...	98.10	99.65	77.10	59.70	60.75	37.40
25	...	98.10	99.35	77.00	59.70	60.45	37.30	...	98.10	99.65	77.10	59.70	60.75	37.40
26	...	98.10	99.35	77.00	59.70	60.45	37.30	...	98.10	99.65	77.10	59.70	60.75	37.40
27	...	98.10	99.35	77.00	59.70	60.45	37.30	...	98.10	99.65	77.10	59.70	60.75	37.40
28	...	98.10	99.35	77.00	59.70	60.45	37.30	...	98.10	99.65	77.10	59.70	60.75	37.40
29	...	98.10	99.35	77.00	59.70	60.45	37.30	...	.....	.....	.....	.....	.....	.....
30	...	98.10	99.40	77.00	59.70	60.50	37.30	...	.....	.....	.....	.....	.....	.....
31	...	98.10	99.40	77.00	59.70	60.50	37.30	...	.....	.....	.....	.....	.....	.....

Date	Footnote	March 1910 — Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water	Footnote	April 1910 — Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water
1	...	98.10	99.65	77.10	1059.70	1060.75	1037.40	...	96.80	100.00	81.20	1058.40	1061.10	1041.50
2	...	98.10	99.65	77.15	59.70	60.75	37.45	...	96.70	100.00	81.30	58.30	61.10	41.60
3	...	98.10	99.65	77.15	59.70	60.75	37.45	...	96.70	100.00	81.35	58.30	61.10	41.65
4	...	98.10	99.65	77.15	59.70	60.75	37.45	...	96.70	100.00	81.35	58.30	61.10	41.65
5	...	98.10	99.65	77.15	59.70	60.75	37.45	...	96.70	100.05	81.35	58.30	61.15	41.65
6	...	98.10	99.70	77.20	59.70	60.80	37.50	...	96.70	100.05	81.40	58.30	61.15	41.70
7	...	98.10	99.70	77.20	59.70	60.80	37.50	...	96.70	100.05	81.40	58.30	61.15	41.70
8	...	98.10	99.70	77.20	59.70	60.80	37.50	2	96.70	100.10	81.40	58.30	61.20	41.70
9	...	98.10	99.70	77.20	59.70	60.80	37.50	...	96.70	100.10	81.40	58.30	61.20	41.70
10	...	98.10	99.70	77.20	59.70	60.80	37.50	...	96.70	100.10	81.40	58.30	61.20	41.70
11	1	97.60	99.70	77.90	59.20	60.80	38.20	...	96.70	100.20	81.40	58.30	61.30	41.70
12	...	98.00	99.70	77.80	59.60	60.80	38.10	...	96.70	100.20	81.50	58.30	61.30	41.80
13	...	98.00	99.70	77.70	59.60	60.80	38.00	...	96.70	100.05	81.50	58.30	61.15	41.80
14	...	98.00	99.70	77.70	59.60	60.80	38.00	...	96.70	100.10	81.50	58.30	61.20	41.80
15	...	98.00	99.70	77.70	59.60	60.80	38.00	...	96.70	100.10	81.50	58.30	61.20	41.80
16	...	98.00	99.70	77.70	59.60	60.80	38.00	...	96.70	100.10	81.50	58.30	61.20	41.80
17	...	98.00	99.70	77.70	59.60	60.80	38.00	...	96.70	100.20	81.60	58.30	61.30	41.90
18	...	98.00	99.70	77.80	59.60	60.80	38.10	...	96.70	100.30	81.60	58.30	61.40	41.90
19	...	98.00	99.70	77.85	59.60	60.80	38.15	...	96.70	100.30	81.70	58.30	61.40	42.00
20	...	98.00	99.70	77.85	59.60	60.80	38.15	...	96.70	100.50	81.80	58.30	61.60	42.10
21	...	98.00	99.70	77.90	59.60	60.80	38.20	...	96.70	100.55	81.80	58.30	61.65	42.10
22	...	98.00	99.80	77.90	59.60	60.90	38.20	...	96.70	100.10	82.00	58.30	61.20	42.30
23	...	98.10	99.80	80.00	59.70	60.90	40.30	3	96.70	100.00	82.00	58.30	61.10	42.30
24	...	98.10	99.80	80.00	59.70	60.90	40.30	...	96.70	100.20	82.10	58.30	61.30	42.40
25	...	98.10	99.90	80.00	59.70	61.00	40.30	...	96.70	100.50	82.10	58.30	61.60	42.40
26	...	98.10	99.90	80.00	59.70	61.00	40.30	...	96.30	100.40	82.20	57.90	61.50	42.50
27	...	98.10	99.95	80.00	59.70	61.05	40.30	...	96.40	100.40	82.40	58.00	61.50	42.70
28	...	98.10	100.00	80.00	59.70	61.10	40.30	...	96.20	100.40	82.60	57.80	61.50	42.90
29	...	98.00	100.00	80.00	59.60	61.10	40.30	...	96.20	100.30	82.90	57.80	61.40	43.20
30	...	97.60	100.00	80.70	59.20	61.10	41.00	...	96.20	100.35	83.00	57.80	61.45	43.30
31	...	97.10	100.00	81.00	58.70	61.10	41.30	...	.....	.....	.....	.....	.....	.....

1. The change of the water level from the 11th to the 13th was caused by having some stop logs out trying to lower the water at the fishway. (R. B.) (S.)

2. Ferry started, lake open. (M.)

3. High wind, NW. (M.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—KEEWATIN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	Footnote	May 1910 — Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water	Footnote	June 1910 — Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water
1	...	96.10	100.30	83.00	1057.70	1061.40	1043.30	...	95.80	99.90	82.70	1057.40	1061.00	1043.00
2	...	96.10	100.45	83.00	57.70	61.55	43.30	...	95.80	99.80	82.70	57.40	60.90	43.00
3	...	96.00	100.40	83.00	57.60	61.50	43.30	...	95.80	99.70	82.60	57.40	60.80	42.90
4	...	96.00	100.40	83.10	57.60	61.50	43.40	...	95.80	99.70	82.60	57.40	60.80	42.90
5	...	96.00	100.35	83.10	57.60	61.45	43.40	...	95.80	99.70	82.60	57.40	60.80	42.90
6	...	96.10	100.30	83.00	57.70	61.40	43.30	...	95.80	99.70	82.60	57.40	60.80	42.90
7	...	96.00	100.35	83.00	57.60	61.45	43.30	...	95.80	99.65	82.60	57.40	60.75	42.90
8	...	96.00	100.20	83.00	57.60	61.30	43.30	...	96.20	99.65	82.20	57.80	60.75	42.50
9	...	96.00	100.00	82.90	57.60	61.10	43.20	...	96.60	99.60	82.00	58.20	60.70	42.30
10	...	96.00	100.00	82.90	57.60	61.10	43.20	...	96.80	99.70	81.70	58.40	60.80	42.00
11	...	95.90	100.10	82.80	57.50	61.20	43.10	...	96.90	99.70	81.50	58.50	60.80	41.80
12	...	95.90	100.20	83.00	57.50	61.30	43.30	...	96.90	99.60	81.40	58.50	60.70	41.70
13	...	96.00	100.20	83.00	57.60	61.30	43.30	...	97.00	99.60	81.40	58.60	60.70	41.70
14	...	95.90	100.30	83.00	57.50	61.40	43.30	...	97.00	99.70	81.30	58.60	60.80	41.60
15	...	95.90	100.20	83.00	57.50	61.30	43.30	...	97.10	99.70	81.30	58.70	60.80	41.60
16	...	95.90	100.20	83.00	57.50	61.30	43.30	...	97.10	99.70	81.30	58.70	60.80	41.60
17	...	95.85	100.10	83.00	57.45	61.20	43.30	...	97.10	99.80	81.30	58.70	60.90	41.60
18	...	95.80	100.10	83.00	57.40	61.20	43.30	...	97.10	99.70	81.30	58.70	60.80	41.60
19	...	95.80	100.10	82.95	57.40	61.20	43.25	...	97.10	99.70	81.40	58.70	60.80	41.70
20	...	95.80	100.00	82.90	57.40	61.10	43.20	...	97.10	99.60	81.40	58.70	60.70	41.70
21	...	95.80	100.00	82.90	57.40	61.10	43.20	...	97.10	99.70	81.40	58.70	60.80	41.70
22	...	95.80	100.10	82.85	57.40	61.20	43.15	...	97.10	99.70	81.40	58.70	60.80	41.70
23	...	95.80	100.00	82.85	57.40	61.10	43.15	...	97.10	99.70	81.30	58.70	60.80	41.60
24	...	95.80	99.90	82.70	57.40	61.00	43.00	...	97.10	99.60	81.30	58.70	60.70	41.60
25	...	95.80	100.00	82.80	57.40	61.10	43.10	...	97.10	99.60	81.40	58.70	60.70	41.70
26	...	95.80	100.00	82.80	57.40	61.10	43.10	...	97.10	99.70	81.40	58.70	60.80	41.70
27	1	95.90	100.30	82.70	57.50	61.40	43.00	...	97.10	99.60	81.40	58.70	60.70	41.70
28	...	95.90	100.20	82.90	57.50	61.30	43.20	...	97.10	99.60	81.50	58.70	60.70	41.80
29	...	95.90	100.10	82.80	57.50	61.20	43.10	...	97.10	99.60	81.40	58.70	60.70	41.70
30	...	95.85	99.80	82.70	57.45	60.90	43.00	...	97.10	99.60	81.40	58.70	60.70	41.70
31	...	95.80	99.80	82.70	57.40	60.90	43.00	...	.....	.....	.....	.....	.....	.....
		July 1910							August 1910					
1	...	97.10	99.60	81.40	1058.70	1060.70	1041.70	...	98.20	98.80	78.20	1059.80	1059.90	1038.50
2	...	97.10	99.60	81.30	58.70	60.70	41.60	...	98.20	98.80	78.20	59.80	59.90	38.50
3	...	97.10	99.50	81.30	58.70	60.50	41.60	...	98.20	98.70	78.20	59.80	59.80	38.50
4	...	97.10	99.50	81.00	58.70	60.60	41.30	...	98.10	98.70	78.10	59.70	59.80	38.40
5	...	97.10	99.40	80.00	58.70	60.50	40.30	...	98.10	98.60	78.10	59.70	59.70	38.40
6	...	97.20	99.40	80.00	58.80	60.50	40.30	...	98.00	98.60	78.20	59.60	59.70	38.50
7	...	97.50	99.40	80.00	59.10	60.50	40.30	...	98.00	98.70	78.15	59.60	59.80	38.45
8	...	97.70	99.30	79.60	59.30	60.40	39.90	...	98.00	98.50	78.10	59.60	59.60	38.40
9	...	97.90	99.30	79.30	59.50	60.40	39.60	...	98.00	98.60	78.10	59.60	59.70	38.40
10	...	97.90	99.30	79.20	59.50	60.40	39.50	...	97.90	98.60	78.00	59.50	59.70	38.30
11	...	97.90	99.30	79.10	59.50	60.40	39.40	...	98.00	98.60	78.00	59.60	59.70	38.30
12	...	98.00	99.30	79.00	59.60	60.40	39.30	...	97.90	98.40	78.00	59.50	59.50	38.30
13	...	98.00	99.20	78.90	59.60	60.30	39.20	...	97.80	98.40	77.90	59.40	59.50	38.20
14	...	98.10	99.20	78.80	59.70	60.30	39.10	...	97.80	98.50	77.90	59.40	59.60	38.20
15	...	98.10	99.10	78.80	59.70	60.20	39.10	...	97.80	98.50	77.85	59.40	59.60	38.15
16	...	98.20	99.10	78.80	59.80	60.20	39.10	...	97.80	98.50	77.90	59.40	59.60	38.20
17	...	98.10	99.10	78.70	59.70	60.20	39.00	...	97.70	98.50	77.80	59.30	59.60	38.10
18	...	98.00	99.10	78.70	59.60	60.20	39.00	...	97.70	98.50	77.70	59.30	59.60	38.00
19	...	98.00	99.00	78.65	59.60	60.10	38.95	...	97.70	98.40	77.70	59.30	59.50	38.00
20	...	98.00	99.00	78.60	59.60	60.10	38.90	...	97.60	98.40	77.50	59.20	59.50	37.80
21	...	98.10	99.00	78.60	59.70	60.10	38.90	...	97.60	98.50	77.50	59.20	59.60	37.80
22	...	98.20	98.90	78.50	59.80	60.00	38.80	...	97.60	98.40	77.50	59.20	59.50	37.80
23	...	98.20	98.90	78.50	59.80	60.00	38.80	...	97.60	98.30	77.40	59.20	59.40	37.70
24	...	98.20	98.90	78.50	59.80	60.00	38.80	...	97.60	98.50	77.40	59.20	59.60	37.70
25	...	98.20	98.80	78.40	59.80	59.90	38.70	...	97.60	98.40	77.50	59.20	59.50	37.80
26	...	98.30	98.80	78.30	59.90	59.90	38.60	...	97.60	98.40	77.40	59.20	59.50	37.70
27	...	98.30	98.80	78.40	59.90	59.90	38.70	...	97.60	98.40	77.30	59.20	59.50	37.60
28	...	98.30	98.90	78.40	59.90	60.00	38.70	...	97.60	98.30	77.30	59.20	59.40	37.60
29	...	98.20	98.70	78.25	59.80	59.80	38.55	2	97.60	98.50	77.40	59.20	59.60	37.70
30	...	98.20	98.70	78.20	59.80	59.80	38.50	3	97.60	98.40	77.30	59.20	59.50	37.60
31	...	98.20	98.70	78.20	59.80	59.80	38.50	...	97.60	98.40	77.20	59.20	59.50	37.50

1. High wind. (M.)
2. High wind and smoky. (M.)
3. Very high wind and thunder. (M.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—KEEWATIN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

SEPTEMBER 1910 OCTOBER

Date	Footnote	Local Datum			Sea-level Datum			Footnote	Local Datum			Sea-level Datum		
		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1		97.50	98.30	77.20	1059.10	1059.40	1037.50		97.00	98.00	76.80	1058.60	1059.10	1037.10
2		97.50	98.40	77.30	59.10	59.50	37.60		97.00	98.00	76.80	58.60	59.10	37.10
3		97.50	98.40	77.30	59.10	59.50	37.60		97.00	98.00	76.90	58.60	59.10	37.20
4		97.40	98.30	77.30	59.00	59.40	37.60		97.00	98.10	76.90	58.60	59.20	37.20
5		97.40	98.30	77.30	59.00	59.40	37.60		97.00	98.10	76.90	58.60	59.20	37.20
6		97.40	98.30	77.30	59.00	59.40	37.60		97.00	98.00	76.80	58.60	59.10	37.10
7		97.40	98.40	77.30	59.00	59.50	37.60		97.00	98.00	76.80	58.60	59.10	37.10
8		97.40	98.30	77.30	59.00	59.40	37.60		97.00	98.00	76.80	58.60	59.10	37.10
9		97.40	98.30	77.25	59.00	59.40	37.55		96.90	97.80	76.70	58.50	58.90	37.00
10		97.40	98.30	77.20	59.00	59.40	37.50		96.80	97.80	76.50	58.40	58.90	36.80
11	1	97.40	98.50	77.30	59.00	59.60	37.60		96.80	97.70	76.40	58.40	58.80	36.70
12		97.40	98.40	77.30	59.00	59.50	37.60		96.70	97.70	76.40	58.30	58.80	36.70
13		97.40	98.40	77.20	59.00	59.50	37.50		96.70	97.70	76.40	58.30	58.80	36.70
14		97.40	98.30	77.30	59.00	59.40	37.60		96.70	97.60	76.20	58.30	58.70	36.50
15		97.40	98.30	77.30	59.00	59.40	37.60		96.70	97.60	76.20	58.30	58.70	36.50
16		97.40	98.30	77.30	59.00	59.40	37.60		96.70	97.60	76.20	58.30	58.70	36.50
17		97.40	98.30	77.30	59.00	59.40	37.60		96.60	97.60	76.20	58.20	58.70	36.50
18		97.40	98.30	77.20	59.00	59.40	37.50		96.60	97.40	76.30	58.20	58.50	36.60
19		97.30	98.30	77.20	58.90	59.40	37.50		96.00	97.00	76.30	57.60	58.10	36.60
20		97.30	98.20	77.10	58.90	59.30	37.40		96.40	97.20	76.20	58.00	58.30	36.50
21		97.30	98.20	77.10	58.90	59.30	37.40		96.40	97.10	76.10	58.00	58.20	36.40
22		97.20	98.20	77.10	58.80	59.30	37.40		96.40	97.10	76.10	58.00	58.20	36.40
23		97.20	98.20	77.00	58.80	59.30	37.30		96.40	97.10	76.10	58.00	58.20	36.40
24		97.10	98.15	77.00	58.70	59.25	37.30		96.40	97.00	76.00	58.00	58.10	36.30
25		97.10	98.20	77.00	58.70	59.30	37.30		96.40	97.10	76.00	58.00	58.20	36.30
26		97.10	98.10	77.00	58.70	59.20	37.30		96.30	97.00	76.00	57.90	58.10	36.30
27		97.10	98.30	76.90	58.70	59.40	37.20		96.30	97.00	76.00	57.90	58.10	36.30
28		97.00	98.20	77.00	58.60	59.30	37.30		96.30	97.00	76.00	57.90	58.10	36.30
29		97.00	98.00	77.00	58.60	59.10	37.30		96.10	96.80	76.00	57.70	57.90	36.30
30		97.00	98.20	76.90	58.60	59.30	37.20		96.10	96.90	76.00	57.70	58.00	36.30
31									96.20	97.00	76.00	57.80	58.10	36.30

NOVEMBER 1910 DECEMBER

1		96.10	97.00	75.90	1057.70	1058.10	1036.20		96.10	97.10	75.50	1057.70	1058.20	1035.80
2		96.20	97.10	75.90	57.80	58.20	36.20		96.00	97.10	75.50	57.60	58.20	35.80
3		96.20	97.00	75.90	57.80	58.10	36.20		96.00	97.10	75.40	57.60	58.20	35.70
4		96.20	97.20	75.80	57.80	58.30	36.10		96.00	97.10	75.40	57.60	58.20	35.70
5		96.20	97.10	75.80	57.80	58.20	36.10		96.00	97.10	75.40	57.60	58.20	35.70
6		96.10	97.10	75.60	57.70	58.20	35.90		96.00	97.10	75.40	57.60	58.20	35.70
7		96.10	97.10	75.60	57.70	58.20	35.90		96.00	97.10	75.30	57.60	58.20	35.60
8		96.10	97.20	75.65	57.70	58.30	35.95		96.00	97.10	75.30	57.60	58.20	35.60
9		96.20	97.20	75.65	57.80	58.30	35.95		96.00	97.10	75.30	57.60	58.20	35.60
10		96.10	97.00	75.70	57.70	58.10	36.00		96.00	97.10	75.30	57.60	58.20	35.60
11		96.10	97.00	75.70	57.70	58.10	36.00		96.00	97.10	75.30	57.60	58.20	35.60
12		96.00	96.80	75.75	57.60	57.90	36.05		96.00	97.10	75.30	57.60	58.20	35.60
13		96.00	96.70	75.70	57.60	57.80	36.00		96.00	97.10	75.30	57.60	58.20	35.60
14		96.10	96.90	75.60	57.70	58.00	35.90		96.00	97.10	75.30	57.60	58.20	35.60
15		96.10	96.90	75.65	57.70	58.00	35.95		96.00	97.10	75.30	57.60	58.20	35.60
16		96.20	97.10	75.65	57.80	58.20	35.95		96.00	97.10	75.30	57.60	58.20	35.60
17		96.20	97.00	75.70	57.80	58.10	36.00		96.00	97.10	75.30	57.60	58.20	35.60
18		96.20	97.10	75.70	57.80	58.20	36.00		96.00	97.10	75.30	57.60	58.20	35.60
19		96.20	97.20	75.60	57.80	58.30	35.90		96.00	c 97.60	75.30	57.60	.....	35.60
20		96.20	97.10	75.60	57.80	58.20	35.90		96.00	97.10	75.30	57.60	58.20	35.60
21		96.20	97.10	75.60	57.80	58.20	35.90		96.00	97.10	75.30	57.60	58.20	35.60
22		96.20	97.10	75.60	57.80	58.20	35.90		96.00	97.10	75.30	57.60	58.20	35.60
23		96.20	97.00	75.60	57.80	58.10	35.90		96.00	97.10	75.25	57.60	58.20	35.55
24		96.20	97.00	75.50	57.80	58.10	35.80		96.00	97.10	75.25	57.60	58.20	35.55
25		96.20	97.10	75.60	57.80	58.20	35.90		96.00	97.10	75.25	57.60	58.20	35.55
26		96.20	97.10	75.60	57.80	58.20	35.90		96.00	97.10	75.25	57.60	58.20	35.55
27		96.20	97.10	75.60	57.80	58.20	35.90		96.00	97.10	75.20	57.60	58.20	35.50
28		96.20	97.10	75.60	57.80	58.20	35.90		96.00	97.10	75.20	57.60	58.20	35.50
29		96.20	97.10	75.60	57.80	58.20	35.90		96.00	97.10	75.20	57.60	58.20	35.50
30		96.20	97.10	75.60	57.80	58.20	35.90		96.00	97.10	75.20	57.60	58.20	35.50
31									96.00	97.10	75.20	57.60	58.20	35.50

1. Very high wind, NW. (M.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—KEEWATIN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	JANUARY 1911							FEBRUARY						
	Footnote	Local Datum			Sea-level Datum			Footnote	Local Datum			Sea-level Datum		
		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1	...	96.00	97.10	75.30	1057.60	1058.20	1035.60	...	95.85	96.75	74.85	1057.45	1057.85	1035.15
2	...	96.00	97.10	75.25	57.60	58.20	35.55	...	95.85	96.75	74.80	57.45	57.85	35.10
3	...	96.00	97.05	75.25	57.60	58.15	35.55	...	95.85	96.75	74.80	57.45	57.85	35.10
4	...	96.00	97.05	75.25	57.60	58.15	35.55	...	95.80	96.75	74.80	57.40	57.85	35.10
5	...	96.00	97.05	75.25	57.60	58.15	35.55	...	95.80	96.75	74.80	57.40	57.85	35.10
6	...	96.00	97.05	75.25	57.60	58.15	35.55	...	95.80	96.75	74.80	57.40	57.85	35.10
7	...	96.00	97.00	75.20	57.60	58.10	35.50	...	95.80	96.70	74.80	57.40	57.80	35.10
8	...	96.00	97.00	75.20	57.60	58.10	35.50	...	95.80	96.70	74.80	57.40	57.80	35.10
9	...	96.00	97.00	75.20	57.60	58.10	35.50	...	95.80	96.70	74.80	57.40	57.80	35.10
10	...	96.00	97.00	75.20	57.60	58.10	35.50	...	95.80	96.70	74.80	57.40	57.80	35.10
11	...	96.00	97.00	75.20	57.60	58.10	35.50	...	95.80	96.70	74.80	57.40	57.80	35.10
12	...	96.00	97.00	75.20	57.60	58.10	35.50	...	95.80	96.70	74.80	57.40	57.80	35.10
13	...	96.00	97.00	75.20	57.60	58.10	35.50	...	95.80	96.70	74.80	57.40	57.80	35.10
14	...	96.00	97.00	75.20	57.60	58.10	35.50	...	95.80	96.70	74.80	57.40	57.80	35.10
15	...	96.00	97.00	75.20	57.60	58.10	35.50	...	95.80	96.70	74.80	57.40	57.80	35.10
16	...	96.00	96.90	75.20	57.60	58.00	35.50	...	95.80	96.70	74.80	57.40	57.80	35.10
17	...	95.90	96.90	75.20	57.50	58.00	35.50	...	95.80	96.65	74.80	57.40	57.75	35.10
18	...	95.90	96.85	75.20	57.50	57.95	35.50	...	95.80	96.65	74.80	57.40	57.75	35.10
19	...	95.90	96.85	75.10	57.50	57.95	35.40	...	95.80	96.65	74.80	57.40	57.75	35.10
20	...	95.90	96.85	75.10	57.50	57.95	35.40	...	95.80	96.65	74.80	57.40	57.75	35.10
21	...	95.90	96.80	75.05	57.50	57.90	35.35	...	95.75	96.60	74.80	57.35	57.70	35.10
22	...	95.90	96.80	75.05	57.50	57.90	35.35	...	95.75	96.60	74.80	57.35	57.70	35.10
23	...	95.90	96.80	75.00	57.50	57.90	35.30	...	95.75	96.60	74.80	57.35	57.70	35.10
24	...	95.90	96.80	75.00	57.50	57.90	35.30	...	95.75	96.60	74.80	57.35	57.70	35.10
25	...	95.90	96.80	75.00	57.50	57.90	35.30	...	95.75	96.60	74.80	57.35	57.70	35.10
26	...	95.90	96.80	75.00	57.50	57.90	35.30	...	95.75	96.60	74.80	57.35	57.70	35.10
27	...	95.90	96.75	74.90	57.50	57.85	35.20	...	95.75	96.60	74.80	57.35	57.70	35.10
28	...	95.85	96.75	74.85	57.45	57.85	35.15	...	95.75	96.60	74.80	57.35	57.70	35.10
29	...	95.85	96.75	74.85	57.45	57.85	35.15	...						
30	...	95.85	96.75	74.85	57.45	57.85	35.15	...						
31	...	95.85	96.75	74.85	57.45	57.85	35.15	...						

Date	MARCH 1911							APRIL						
	Footnote	Local Datum			Sea-level Datum			Footnote	Local Datum			Sea-level Datum		
		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1	...	95.70	96.60	74.80	1057.30	1057.70	1035.10	...	95.10	96.00	75.75	1056.70	1057.10	1036.05
2	...	95.70	96.60	74.80	57.30	57.70	35.10	...	95.00	95.95	75.75	56.60	57.05	36.05
3	...	95.70	96.50	74.80	57.30	57.60	35.10	...	95.00	95.95	75.75	56.60	57.05	36.05
4	...	95.65	96.50	74.75	57.25	57.60	35.05	...	95.00	95.95	75.70	56.60	57.05	36.00
5	...	95.65	96.50	74.75	57.25	57.60	35.05	...	95.00	95.90	75.70	56.60	57.00	36.00
6	...	95.60	96.45	74.75	57.20	57.55	35.05	...	95.00	95.90	75.70	56.60	57.00	36.00
7	...	95.55	96.45	74.75	57.15	57.55	35.05	...	95.00	95.85	75.70	56.60	56.95	36.00
8	...	95.55	96.40	74.70	57.15	57.50	35.00	...	95.00	95.85	75.70	56.60	56.95	36.00
9	...	95.50	96.40	74.70	57.10	57.50	35.00	...	95.00	95.80	75.75	56.60	56.90	36.05
10	...	95.50	96.40	74.70	57.10	57.50	35.00	...	95.00	95.80	75.75	56.60	56.90	36.05
11	...	95.50	96.40	74.70	57.10	57.50	35.00	...	95.00	95.80	75.75	56.60	56.90	36.05
12	...	95.50	96.40	74.70	57.10	57.50	35.00	...	95.00	95.85	75.75	56.60	56.95	36.05
13	...	95.50	96.35	74.70	57.10	57.45	35.00	...	95.00	95.85	75.80	56.60	56.95	36.10
14	...	95.45	96.35	74.70	57.05	57.45	35.00	...	95.00	95.90	75.80	56.60	57.00	36.10
15	...	95.45	96.35	74.70	57.05	57.45	35.00	...	95.00	95.90	75.85	56.60	57.00	36.15
16	...	95.40	96.30	74.70	57.00	57.40	35.00	...	95.00	95.95	75.85	56.60	57.05	36.15
17	...	95.35	96.30	74.70	56.95	57.40	35.00	...	95.10	95.95	75.85	56.70	57.05	36.15
18	...	95.35	96.25	74.70	56.95	57.35	35.00	...	95.10	96.00	75.80	56.70	57.10	36.10
19	...	95.30	96.25	74.70	56.90	57.35	35.00	...	95.10	96.00	75.80	56.70	57.10	36.10
20	...	95.30	96.20	74.70	56.90	57.30	35.00	...	95.10	95.90	75.85	56.70	57.00	36.15
21	...	95.25	96.20	74.75	56.85	57.30	35.05	...	95.10	95.90	75.80	56.70	57.00	36.10
22	...	95.25	96.20	74.75	56.85	57.30	35.05	...	95.15	95.95	75.80	56.75	57.05	36.10
23	...	95.20	96.20	74.75	56.80	57.30	35.05	...	95.15	96.00	75.85	56.75	57.10	36.15
24	...	95.20	96.15	74.75	56.80	57.25	35.05	1	95.15	96.10	75.80	56.75	57.20	36.10
25	...	95.20	96.15	74.75	56.80	57.25	35.05	...	95.15	96.10	75.80	56.75	57.20	36.10
26	...	95.15	96.10	75.75	56.75	57.20	36.05	...	95.20	96.10	75.80	56.80	57.20	36.10
27	...	95.15	96.10	75.75	56.75	57.20	36.05	...	95.20	96.10	75.80	56.80	57.20	36.10
28	...	95.15	b 96.05	75.75	56.75	57.15	36.05	2	95.20	96.10	75.80	56.80	57.20	36.10
29	...	95.10	b 96.05	75.75	56.70	57.15	36.05	...	95.20	96.00	75.80	56.80	57.10	36.10
30	...	95.10	96.00	75.75	56.70	57.10	36.05	...	95.10	96.00	75.80	56.70	57.10	36.10
31	...	95.10	96.00	75.75	56.70	57.10	36.05	...						

1. Blowing hard; ice cleared from bay. (M.)

2. Ferry started running. (M.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—KEEWATIN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	Footnote	May 1911 Local Datum			Sea-level Datum			Footnote	June 1911 Local Datum			Sea-level Datum		
		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1	...	95.15	96.10	75.80	1056.75	1057.20	1036.10	...	95.10	96.15	75.60	1056.70	1057.25	1035.90
2	...	95.15	96.05	75.80	56.75	57.15	36.10	...	95.15	96.15	75.60	56.75	57.25	35.90
3	...	95.10	96.00	75.80	56.70	57.10	36.10	...	95.15	96.20	75.60	56.75	57.30	35.90
4	...	95.10	96.00	75.80	56.70	57.10	36.10	...	95.15	96.20	75.75	56.75	57.30	36.05
5	...	95.10	96.05	75.80	56.70	57.15	36.10	...	95.20	96.25	75.75	56.80	57.35	36.05
6	...	95.00	95.90	75.80	56.60	57.00	36.10	...	95.20	96.25	75.75	56.80	57.35	36.05
7	...	95.00	95.80	75.80	56.60	56.90	36.10	...	95.20	96.20	75.80	56.80	57.30	36.10
8	...	95.00	95.90	75.80	56.60	57.00	36.10	...	95.20	96.30	75.80	56.80	57.40	36.10
9	...	95.00	95.90	75.80	56.60	57.00	36.10	...	95.20	96.30	75.80	56.80	57.40	36.10
10	...	95.10	96.00	75.75	56.70	57.10	36.05	...	95.20	96.30	75.80	56.80	57.40	36.10
11	...	95.10	96.00	75.75	56.70	57.10	36.05	...	95.20	96.25	75.85	56.80	57.35	36.15
12	...	95.05	96.00	75.80	56.65	57.10	36.10	...	95.20	96.20	75.85	56.80	57.30	36.15
13	...	95.10	96.10	75.70	56.70	57.20	36.00	...	95.20	96.30	75.85	56.80	57.40	36.15
14	...	95.15	96.10	75.70	56.75	57.20	36.00	...	95.20	96.40	75.80	56.80	57.50	36.10
15	...	95.10	96.00	75.70	56.70	57.10	36.00	...	95.20	96.30	75.80	56.80	57.40	36.10
16	...	95.10	96.00	75.70	56.70	57.10	36.00	...	95.20	96.30	75.80	56.80	57.40	36.10
17	...	95.10	96.10	75.70	56.70	57.20	36.00	...	95.20	96.30	75.80	56.80	57.40	36.10
18	...	95.10	96.10	75.70	56.70	57.20	36.00	...	95.20	96.30	75.80	56.80	57.40	36.10
19	...	95.15	96.20	75.70	56.75	57.30	36.00	...	95.25	96.30	75.85	56.85	57.40	36.15
20	...	95.15	96.20	75.70	56.75	57.30	36.00	...	95.25	96.40	75.90	56.85	57.50	36.20
21	...	95.15	96.20	75.70	56.75	57.30	36.00	...	95.25	96.40	75.80	56.85	57.50	36.10
22	...	95.10	96.10	75.60	56.70	57.20	35.90	1	95.20	96.25	75.80	56.80	57.35	36.10
23	...	95.10	96.00	75.60	56.70	57.10	35.90	2	95.25	96.30	75.90	56.85	57.40	36.20
24	...	95.10	96.05	75.65	56.70	57.15	35.95	...	95.25	96.30	75.90	56.85	57.40	36.20
25	...	95.15	96.20	75.65	56.75	57.30	35.95	...	95.30	96.40	75.90	56.90	57.50	36.20
26	...	95.15	96.20	75.60	56.75	57.30	35.90	...	95.30	96.35	75.90	56.90	57.45	36.20
27	...	95.15	96.30	75.60	56.75	57.40	35.90	...	95.30	96.15	75.90	56.90	57.25	36.20
28	...	95.10	96.10	75.60	56.70	57.20	35.90	...	95.40	96.50	75.95	57.00	57.60	36.25
29	...	95.10	96.15	75.60	56.70	57.25	35.90	...	95.30	96.45	75.90	56.90	57.55	36.20
30	...	95.15	96.20	75.60	56.75	57.30	35.90	...	95.30	96.25	75.90	56.90	57.35	36.20
31	...	95.10	96.15	75.60	56.70	57.25	35.90	...						

Date	Footnote	July 1911 Local Datum			Sea-level Datum			Footnote	August 1911 Local Datum			Sea-level Datum		
		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1	...	95.40	96.40	75.90	1057.00	1057.50	1036.20	...	95.00	95.90	75.80	1056.60	1057.00	1036.10
2	...	95.40	96.30	75.90	57.00	57.40	36.20	...	95.00	95.80	75.70	56.60	56.90	36.00
3	...	95.35	96.30	75.90	56.95	57.40	36.20	...	95.00	98.80	75.70	56.60	56.90	36.00
4	...	95.40	96.40	75.80	57.00	57.50	36.10	...	95.00	95.80	75.65	56.60	56.90	35.95
5	...	95.40	96.30	75.90	57.00	57.40	36.20	...	95.00	96.00	75.65	56.60	57.10	35.95
6	...	95.40	96.30	75.90	57.00	57.40	36.20	...	95.00	96.00	75.60	56.60	57.10	35.90
7	...	95.40	96.30	75.85	57.00	57.40	36.15	...	95.00	95.90	75.60	56.60	57.00	35.90
8	...	95.40	96.50	75.95	57.00	57.60	36.25	...	95.00	95.90	75.60	56.60	57.00	35.90
9	...	95.40	96.50	75.95	57.00	57.60	36.25	...	95.00	95.85	75.60	56.60	56.95	35.90
10	3	95.45	96.60	75.90	57.05	57.70	36.20	...	95.00	96.00	75.60	56.60	57.10	35.90
11	...	95.35	96.30	76.00	56.95	57.40	36.30	...	95.00	95.90	75.60	56.60	57.00	35.90
12	...	95.30	96.20	76.00	56.90	57.30	36.30	...	95.00	95.90	75.65	56.60	57.00	35.95
13	...	95.35	96.20	75.90	56.95	57.30	36.20	...	95.00	95.90	75.55	56.60	57.00	35.85
14	4	95.40	96.30	75.95	57.00	57.40	36.25	...	95.00	95.90	75.60	56.60	57.00	35.90
15	...	95.40	96.30	76.00	57.00	57.40	36.30	...	95.00	95.90	75.60	56.60	57.00	35.90
16	...	95.40	96.20	75.90	57.00	57.30	36.20	...	95.00	95.85	75.60	56.60	56.95	35.90
17	...	95.30	96.10	75.90	56.90	57.20	36.20	...	95.00	95.90	75.60	56.60	57.00	35.90
18	...	95.15	96.10	75.90	56.75	57.20	36.20	...	95.00	95.90	75.50	56.60	57.00	35.80
19	...	95.15	96.00	75.90	56.75	57.10	36.20	...	95.00	95.80	75.50	56.60	56.90	35.80
20	...	95.15	96.10	75.90	56.75	57.20	36.20	...	95.00	95.80	75.30	56.60	56.90	35.60
21	...	95.10	96.00	75.80	56.70	57.10	36.10	5	95.00	95.80	75.40	56.60	56.90	35.70
22	...	95.10	96.00	75.80	56.70	57.10	36.10	...	95.00	95.70	75.40	56.60	56.80	35.70
23	...	95.00	95.80	75.80	56.60	56.90	36.10	...	95.00	95.80	75.30	56.60	56.90	35.60
24	...	95.00	95.70	75.90	56.60	56.80	36.20	...	95.00	95.90	75.30	56.60	57.00	35.60
25	...	95.00	95.70	75.80	56.60	56.80	36.10	...	95.00	95.90	75.30	56.60	57.00	35.60
26	...	95.00	95.90	75.70	56.60	57.00	36.00	...	95.00	95.90	75.30	56.60	57.00	35.60
27	...	95.00	95.90	75.70	56.60	57.00	36.00	...	95.00	95.80	75.20	56.60	56.90	35.50
28	...	95.00	95.80	75.70	56.60	56.90	36.00	...	95.00	95.00	75.10	56.60	56.10	35.40
29	...	95.00	96.00	75.80	56.60	57.10	36.10	...	95.00	95.70	75.00	56.60	56.80	35.30
30	...	95.00	95.80	75.80	56.60	56.90	36.10	...	95.00	95.70	75.00	56.60	56.80	35.30
31	...	95.00	95.80	75.70	56.60	56.90	36.00	...	95.00	95.70	74.85	56.60	56.80	35.15

1. Shower, high wind. (M.) 2. Shower, very high wind. (M.) 3. High wind and showers. (M.)
4. High wind and showers. (M.) 5. Wind and rain all day. (M.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—KEEWATIN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	Footnote	September 1911 Local Datum Above Dam	Lake	Tail Water	Sea-level Datum Above Dam	Lake	Tail Water	Footnote	October Local Datum Above Dam	Lake	Tail Water	Sea-level Datum Above Dam	Lake	Tail Water
1	...	95.00	95.70	74.80	1056.60	1056.80	1035.10	...	95.10	95.70	74.30	1056.70	1056.80	1034.60
2	...	95.10	95.80	74.80	56.70	56.90	35.10	...	95.10	95.60	74.30	56.70	56.70	34.60
3	...	95.10	95.90	74.90	56.70	57.00	35.20	...	95.10	95.60	74.20	56.70	56.70	34.50
4	...	95.10	95.80	74.80	56.70	56.90	35.10	...	95.10	95.50	74.10	56.70	56.66	34.40
5	...	95.10	95.40	74.80	56.70	56.50	35.10	...	95.00	95.70	74.20	56.60	56.80	34.50
6	...	95.00	95.50	74.70	56.60	56.60	35.00	...	95.00	95.70	74.20	56.60	56.80	34.50
7	...	95.00	95.60	74.70	56.60	56.70	35.00	...	95.00	95.80	74.30	56.60	56.90	34.60
8	...	95.00	95.80	74.70	56.60	56.90	35.00	...	95.00	95.80	74.30	56.60	56.90	34.60
9	...	95.10	95.70	74.50	56.70	56.80	34.80	...	95.00	95.80	74.10	56.60	56.90	34.40
10	...	95.10	95.60	74.60	56.70	56.70	34.90	...	95.00	95.75	74.10	56.60	56.85	34.40
11	...	95.00	95.50	74.50	56.60	56.60	34.80	...	95.00	95.75	74.20	56.60	56.85	34.50
12	...	95.00	95.80	74.70	56.60	56.90	35.00	...	95.00	95.70	74.20	56.60	56.80	34.50
13	...	95.00	95.70	74.80	56.60	56.80	35.10	...	95.00	95.80	74.20	56.60	56.90	34.50
14	...	95.00	95.70	74.90	56.60	56.80	35.20	...	95.00	95.80	74.20	56.60	56.90	34.50
15	...	95.00	95.80	75.00	56.60	56.90	35.30	...	95.00	95.80	74.10	56.60	56.90	34.40
16	...	95.00	95.80	75.00	56.60	56.90	35.30	...	95.00	95.60	74.20	56.60	56.70	34.50
17	...	95.10	95.70	74.80	56.70	56.80	35.10	...	95.00	95.60	74.20	56.60	56.70	34.50
18	...	95.10	96.00	74.80	56.70	57.10	35.10	...	95.00	95.70	74.20	56.60	56.80	34.50
19	...	95.20	95.80	74.80	56.80	56.90	35.10	...	95.00	95.70	74.10	56.60	56.80	34.40
20	...	95.10	95.70	74.80	56.70	56.80	35.10	...	95.00	95.70	74.10	56.60	56.80	34.40
21	...	95.20	95.80	74.70	56.80	56.90	35.00	...	95.00	95.70	74.10	56.60	56.80	34.40
22	...	95.10	95.50	74.70	56.70	56.60	35.00	...	95.00	95.80	74.00	56.60	56.90	34.30
23	...	95.00	95.30	74.60	56.60	56.40	34.90	...	95.00	95.60	74.00	56.60	56.70	34.30
24	...	95.10	95.60	74.60	56.70	56.70	34.90	...	95.00	95.70	74.00	56.60	56.80	34.30
25	...	95.10	95.60	74.30	56.70	56.70	34.60	...	95.00	95.70	73.90	56.60	56.80	34.20
26	...	95.10	95.90	74.40	56.70	57.00	34.70	...	95.00	95.70	73.90	56.60	56.80	34.20
27	...	95.10	95.40	74.40	56.70	56.50	34.70	...	95.00	95.70	74.00	56.60	56.80	34.30
28	...	95.10	95.60	74.50	56.70	56.70	34.80	...	95.00	95.70	74.00	56.60	56.80	34.30
29	...	95.10	95.70	74.50	56.70	56.80	34.80	...	95.00	95.60	74.00	56.60	56.70	34.30
30	...	95.10	95.70	74.40	56.70	56.80	34.70	...	95.00	95.60	73.90	56.60	56.70	34.20
31	...	.....	.....	.....	.....	.....	.....	...	95.00	95.50	73.90	56.60	56.60	34.20

Date	Footnote	November 1911 Local Datum Above Dam	Lake	Tail Water	Sea-level Datum Above Dam	Lake	Tail Water	Footnote	December Local Datum Above Dam	Lake	Tail Water	Sea-level Datum Above Dam	Lake	Tail Water
1	...	95.10	95.70	73.90	1056.70	1056.80	1034.20	...	95.20	95.65	73.80	1056.80	1056.75	1034.10
2	...	95.10	95.70	73.90	56.70	56.80	34.20	...	95.20	95.65	73.80	56.80	56.75	34.10
3	...	95.20	95.80	73.80	56.80	56.90	34.10	...	95.20	95.65	73.80	56.80	56.75	34.10
4	...	95.20	95.80	73.80	56.80	56.90	34.10	...	95.20	95.60	73.80	56.80	56.70	34.10
5	...	95.20	95.70	73.80	56.80	56.80	34.10	...	95.20	95.60	73.80	56.80	56.70	34.10
6	...	95.30	95.70	73.90	56.90	56.80	34.20	...	95.20	95.60	73.80	56.80	56.70	34.10
7	...	95.30	95.80	73.90	56.90	56.90	34.20	...	95.20	95.60	73.80	56.80	56.70	34.10
8	...	95.30	95.70	73.80	56.90	56.80	34.10	...	95.20	95.60	73.80	56.80	56.70	34.10
9	...	95.30	95.70	73.80	56.90	56.80	34.10	...	95.20	95.60	73.80	56.80	56.70	34.10
10	...	95.30	95.70	73.80	56.90	56.80	34.10	...	95.20	95.60	73.80	56.80	56.70	34.10
11	...	95.30	95.70	73.80	56.90	56.80	34.10	...	95.20	95.60	73.80	56.80	56.70	34.10
12	...	95.30	95.70	73.80	56.90	56.80	34.10	...	95.20	95.60	73.80	56.80	56.70	34.10
13	1	95.30	95.70	73.80	56.90	56.80	34.10	...	95.20	95.60	73.80	56.80	56.70	34.10
14	...	95.30	95.70	73.80	56.90	56.80	34.10	...	95.20	95.60	73.80	56.80	56.70	34.10
15	...	95.30	95.70	73.80	56.90	56.80	34.10	...	95.20	95.60	73.80	56.80	56.70	34.10
16	...	95.30	95.70	73.80	56.90	56.80	34.10	...	95.20	95.60	73.80	56.80	56.70	34.10
17	...	95.30	95.70	73.80	56.90	56.80	34.10	...	95.20	95.60	73.80	56.80	56.70	34.10
18	...	95.30	95.70	73.80	56.90	56.80	34.10	...	95.20	95.60	73.80	56.80	56.70	34.10
19	...	95.30	95.70	73.80	56.90	56.80	34.10	...	95.20	95.60	73.80	56.80	56.70	34.10
20	...	95.25	95.70	73.80	56.85	56.80	34.10	...	95.20	95.60	73.80	56.80	56.70	34.10
21	...	95.25	95.70	73.80	56.85	56.80	34.10	...	95.20	95.60	73.80	56.80	56.70	34.10
22	...	95.25	95.70	73.80	56.85	56.80	34.10	...	95.20	95.60	73.80	56.80	56.70	34.10
23	...	95.25	95.70	73.80	56.85	56.80	34.10	...	95.20	95.60	73.80	56.80	56.70	34.10
24	...	95.25	95.70	73.80	56.85	56.80	34.10	...	95.20	95.60	73.80	56.80	56.70	34.10
25	...	95.25	95.70	73.80	56.85	56.80	34.10	...	95.20	95.60	73.80	56.80	56.70	34.10
26	...	95.25	95.70	73.80	56.85	56.80	34.10	...	95.20	95.60	73.80	56.80	56.70	34.10
27	...	95.25	95.70	73.80	56.85	56.80	34.10	...	95.20	95.60	73.80	56.80	56.70	34.10
28	...	95.25	95.70	73.80	56.85	56.80	34.10	...	95.20	95.60	73.80	56.80	56.70	34.10
29	...	95.25	95.70	73.80	56.85	56.80	34.10	...	95.20	95.60	73.80	56.80	56.70	34.10
30	...	95.25	95.70	73.80	56.85	56.80	34.10	...	95.20	95.60	73.80	56.80	56.70	34.10
31	...	.....	.....	.....	.....	.....	.....	...	95.20	95.60	73.80	56.80	56.70	34.10

1. Snow, lake frozen over, ferry stopped. (M.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—KEEWATIN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	Footnote	JANUARY 1912 Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water	Footnote	FEBRUARY Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water
1	...	95.20	95.60	73.80	1056.80	1056.70	1034.10	...	95.20	95.60	73.70	1056.80	1056.70	1034.00
2	...	95.20	95.60	73.80	56.80	56.70	34.10	...	95.20	95.60	73.70	56.80	56.70	34.00
3	...	95.20	95.60	73.80	56.80	56.70	34.10	...	95.20	95.60	73.75	56.80	56.70	34.05
4	...	95.20	95.60	73.80	56.80	56.70	34.10	...	95.25	95.65	73.75	56.85	56.75	34.05
5	...	95.20	95.60	73.80	56.80	56.70	34.10	...	95.25	95.65	73.80	56.85	56.75	34.10
6	...	95.20	95.60	73.80	56.80	56.70	34.10	...	95.25	95.70	73.80	56.85	56.80	34.10
7	...	95.20	95.60	73.80	56.80	56.70	34.10	...	95.25	95.70	73.80	56.85	56.80	34.10
8	...	95.20	95.60	73.80	56.80	56.70	34.10	...	95.25	95.75	73.80	56.85	56.85	34.10
9	...	95.20	95.60	73.80	56.80	56.70	34.10	...	95.25	95.75	73.80	56.85	56.85	34.10
10	...	95.20	95.60	73.80	56.80	56.70	34.10	...	95.25	95.75	73.80	56.85	56.85	34.10
11	...	95.20	95.60	73.80	56.80	56.70	34.10	...	95.25	95.75	73.80	56.85	56.85	34.10
12	...	95.20	95.60	73.80	56.80	56.70	34.10	...	95.25	95.80	73.85	56.85	56.90	34.15
13	...	95.20	95.60	73.80	56.80	56.70	34.10	...	95.25	95.80	73.85	56.85	56.90	34.15
14	...	95.20	95.60	73.80	56.80	56.70	34.10	...	95.25	95.90	73.85	56.85	57.00	34.15
15	...	95.20	95.60	73.80	56.80	56.70	34.10	...	95.25	95.90	73.85	56.85	57.00	34.15
16	...	95.20	95.60	73.70	56.80	56.70	34.00	...	95.25	95.90	73.85	56.85	57.00	34.15
17	...	95.20	95.60	73.70	56.80	56.70	34.00	...	95.25	95.90	73.90	56.85	57.00	34.20
18	...	95.20	95.55	73.75	56.80	56.65	34.05	...	95.25	95.95	73.90	56.85	57.05	34.20
19	...	95.20	95.55	73.75	56.80	56.65	34.05	...	95.25	95.95	73.95	56.85	57.05	34.25
20	...	95.20	95.55	73.75	56.80	56.65	34.05	...	95.25	95.95	73.95	56.85	57.05	34.25
21	...	95.20	95.55	73.75	56.80	56.65	34.05	...	95.25	95.95	73.95	56.85	57.05	34.25
22	...	95.20	95.55	73.75	56.80	56.65	34.05	...	95.25	96.00	73.95	56.85	57.10	34.25
23	...	95.15	95.55	73.75	56.75	56.65	34.05	...	95.30	96.00	73.95	56.90	57.10	34.25
24	...	95.15	95.55	73.75	56.75	56.65	34.05	...	95.30	96.05	74.00	56.90	57.15	34.30
25	...	95.15	95.55	73.75	56.75	56.65	34.05	...	95.30	96.10	74.00	56.90	57.20	34.30
26	...	95.15	95.55	73.80	56.75	56.65	34.10	...	95.30	96.10	74.00	56.90	57.20	34.30
27	...	95.15	95.55	73.80	56.75	56.65	34.10	...	95.30	96.10	74.00	56.90	57.20	34.30
28	...	95.15	95.55	73.80	56.75	56.65	34.10	...	95.30	96.15	74.10	56.90	57.25	34.40
29	...	95.15	95.55	73.70	56.75	56.65	34.00	...	95.30	96.15	74.10	56.90	57.25	34.40
30	...	95.15	95.55	73.70	56.75	56.65	34.00	...	.....	.....	.....	.....	.....	.....
31	...	95.15	95.55	73.75	56.75	56.65	34.05	...	.....	.....	.....	.....	.....	.....

Date	Footnote	MARCH 1912 Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water	Footnote	APRIL Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water
1	...	95.30	96.15	74.10	1056.90	1057.25	1034.40	...	95.30	96.25	74.10	1056.90	1057.35	1034.40
2	...	95.30	96.15	74.10	56.90	57.25	34.40	...	95.30	96.25	74.10	56.90	57.35	34.40
3	...	95.30	96.15	74.10	56.90	57.25	34.40	...	95.30	96.25	74.15	56.90	57.35	34.45
4	...	95.30	96.15	74.10	56.90	57.25	34.40	...	95.30	96.25	74.15	56.90	57.35	34.45
5	...	95.30	96.15	74.00	56.90	57.25	34.30	...	95.30	96.25	74.15	56.90	57.35	34.45
6	...	95.30	96.15	74.00	56.90	57.25	34.30	...	95.30	96.25	74.15	56.90	57.35	34.45
7	...	95.30	96.15	74.00	56.90	57.25	34.30	...	95.30	96.25	74.15	56.90	57.35	34.45
8	...	95.30	96.15	74.00	56.90	57.25	34.30	...	95.30	96.30	74.15	56.90	57.40	34.45
9	...	95.30	96.20	74.00	56.90	57.30	34.30	...	95.30	96.30	74.15	56.90	57.40	34.45
10	...	95.30	96.20	74.10	56.90	57.30	34.40	...	95.30	96.30	74.15	56.90	57.40	34.45
11	...	95.30	96.20	74.10	56.90	57.30	34.40	...	95.30	96.30	74.20	56.90	57.40	34.50
12	...	95.30	96.20	74.10	56.90	57.30	34.40	...	95.30	96.30	74.20	56.90	57.40	34.50
13	...	95.30	96.20	74.05	56.90	57.30	34.35	...	95.30	96.30	74.20	56.90	57.40	34.50
14	...	95.30	96.20	74.05	56.90	57.30	34.35	...	95.30	96.30	74.20	56.90	57.40	34.50
15	...	95.30	96.20	74.05	56.90	57.30	34.35	...	95.30	96.35	74.20	56.90	57.45	34.50
16	...	95.30	96.20	74.05	56.90	57.30	34.35	...	95.30	96.35	74.20	56.90	57.45	34.50
17	...	95.30	96.20	74.05	56.90	57.30	34.35	...	95.30	96.35	74.25	56.90	57.45	34.55
18	...	95.30	96.20	74.05	56.90	57.30	34.35	...	95.30	96.35	74.25	56.90	57.45	34.55
19	...	95.30	96.20	74.05	56.90	57.30	34.35	...	95.30	96.40	74.25	56.90	57.50	34.55
20	...	95.30	96.20	74.05	56.90	57.30	34.35	...	95.35	96.40	74.25	56.95	57.50	34.55
21	...	95.30	96.20	74.05	56.90	57.30	34.35	...	95.35	96.45	74.30	56.95	57.55	34.60
22	...	95.30	96.20	74.05	56.90	57.30	34.35	...	95.35	96.45	74.30	56.95	57.55	34.60
23	...	95.30	96.25	74.05	56.90	57.35	34.35	...	95.35	96.45	74.30	56.95	57.55	34.60
24	...	95.30	96.25	74.05	56.90	57.35	34.35	...	95.35	96.45	74.35	56.95	57.55	34.65
25	...	95.30	96.25	74.05	56.90	57.35	34.35	...	95.35	96.50	74.35	56.95	57.60	34.65
26	...	95.30	96.25	74.05	56.90	57.35	34.35	...	95.35	96.50	74.35	56.95	57.60	34.65
27	...	95.30	96.25	74.05	56.90	57.35	34.35	...	95.35	96.50	74.40	56.95	57.60	34.70
28	...	95.30	96.25	74.05	56.90	57.35	34.35	...	95.35	96.55	74.40	56.95	57.65	34.70
29	...	95.30	96.25	74.05	56.90	57.35	34.35	1	95.35	96.55	74.40	56.95	57.65	34.70
30	...	95.30	96.25	74.05	56.90	57.35	34.35	2	95.35	96.55	74.40	56.95	57.65	34.70
31	...	95.30	96.25	74.05	56.90	57.35	34.35	...	.....	.....	.....	.....	.....	.....

1. Ice left bay. (M.)

2. Ferry came into dock, rain. (M.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—KEEWATIN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	Footnote	May 1912 — Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water	Footnote	June 1912 — Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water
1	...	95.40	96.60	74.30	1057.00	1057.71	1034.60	...	96.20	97.70	74.40	1057.80	1058.81	1034.70
2	...	95.40	96.60	74.40	57.00	57.71	34.70	...	96.40	97.70	74.10	58.00	58.81	34.40
3	...	95.45	96.65	74.40	57.05	57.76	34.70	...	96.40	97.50	73.80	58.00	58.61	34.10
4	...	95.45	96.65	74.40	57.05	57.76	34.70	...	96.80	97.65	74.20	58.40	58.76	34.50
5	...	95.45	96.65	74.50	57.05	57.76	34.80	...	96.80	97.65	74.30	58.40	58.76	34.60
6	...	95.45	96.70	74.50	57.05	57.81	34.80	...	96.80	97.50	74.20	58.40	58.61	34.50
7	...	95.45	96.70	74.50	57.05	57.81	34.80	...	96.80	97.70	73.90	58.40	58.81	34.20
8	...	95.50	96.75	74.55	57.10	57.86	34.85	...	96.90	97.80	73.90	58.50	58.91	34.20
9	...	95.50	96.75	74.60	57.10	57.86	34.90	...	96.90	97.90	73.80	58.50	59.01	34.10
10	...	95.50	96.80	74.60	57.10	57.91	34.90	...	96.90	97.80	73.60	58.50	58.91	33.90
11	...	95.50	96.80	74.60	57.10	57.91	34.90	...	96.85	97.75	73.50	58.45	58.86	33.80
12	...	95.50	96.90	74.65	57.10	58.01	34.95	...	96.90	97.75	73.60	58.50	58.86	33.90
13	...	95.50	96.95	74.65	57.10	58.06	34.95	...	96.90	97.80	73.80	58.50	58.91	34.10
14	...	95.50	96.95	74.70	57.10	58.06	35.00	...	97.00	97.80	73.80	58.60	58.91	34.10
15	...	95.55	97.00	74.70	57.15	58.11	35.00	...	97.00	97.80	73.80	58.60	58.91	34.10
16	...	95.55	97.10	74.70	57.15	58.21	35.00	...	97.00	97.80	73.80	58.60	58.91	34.10
17	1	95.60	97.15	74.50	57.20	58.26	34.80	...	97.10	97.80	73.90	58.70	58.91	34.20
18	...	95.60	97.15	74.50	57.20	58.26	34.80	...	97.10	97.50	73.90	58.70	58.61	34.20
19	...	95.80	97.20	74.40	57.40	58.31	34.70	...	97.10	97.65	74.00	58.70	58.76	34.30
20	...	95.80	97.20	74.40	57.40	58.31	34.70	...	97.10	97.65	74.00	58.70	58.76	34.30
21	...	95.85	97.30	74.40	57.45	58.41	34.70	...	97.10	97.80	74.00	58.70	58.91	34.30
22	...	95.85	97.30	74.40	57.45	58.41	34.70	...	97.10	97.80	73.85	58.70	58.91	34.15
23	...	95.85	97.35	74.45	57.45	58.46	34.75	...	97.10	97.75	73.80	58.70	58.86	34.10
24	...	95.90	97.40	74.40	57.50	58.51	34.70	...	97.10	97.80	73.60	58.70	58.91	33.90
25	...	95.90	97.40	74.30	57.50	58.51	34.60	...	97.10	97.50	73.60	58.70	58.61	33.90
26	...	95.90	97.40	74.30	57.50	58.51	34.60	...	97.10	97.75	73.60	58.70	58.86	33.90
27	...	95.90	97.45	74.30	57.50	58.56	34.60	...	97.15	97.80	73.65	58.75	58.91	33.95
28	...	95.90	97.20	74.30	57.50	58.31	34.60	...	97.15	97.80	73.60	58.75	58.91	33.90
29	...	95.95	97.70	74.30	57.55	58.81	34.60	...	97.15	97.80	73.60	58.75	58.91	33.90
30	...	96.20	97.65	74.30	57.80	58.76	34.60	...	97.15	97.80	73.60	58.75	58.91	33.90
31	...	96.40	97.65	74.20	58.00	58.76	34.50	...						

Date	Footnote	July 1912 — Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water	Footnote	August 1912 — Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water
1	...	97.15	97.75	73.50	1058.75	1058.86	1033.80	...	97.55	98.10	73.60	1059.15	1059.21	1033.90
2	...	97.15	97.80	73.15	58.75	58.91	33.45	...	97.55	98.10	73.55	59.15	59.21	33.85
3	...	97.20	97.85	73.40	58.80	58.96	33.70	...	97.55	98.10	73.60	59.15	59.21	33.90
4	...	97.15	97.80	73.40	58.75	58.91	33.70	...	97.55	98.10	73.60	59.15	59.21	33.90
5	...	97.20	97.85	73.45	58.80	58.96	33.75	...	97.60	98.30	73.65	59.20	59.41	33.95
6	...	97.20	97.95	73.45	58.80	59.06	33.75	...	97.65	98.35	73.70	59.25	59.46	34.00
7	...	97.20	97.90	73.50	58.80	59.01	33.80	...	97.65	98.35	73.75	59.25	59.46	34.05
8	...	97.20	97.80	73.50	58.80	58.91	33.80	...	97.60	98.25	73.80	59.20	59.36	34.10
9	...	97.20	97.85	73.50	58.80	58.96	33.80	...	97.70	98.30	73.80	59.30	59.41	34.10
10	...	97.20	97.85	73.50	58.80	58.96	33.80	...	97.75	98.30	73.85	59.35	59.41	34.15
11	...	97.25	97.90	73.40	58.85	59.01	33.70	...	97.75	98.35	73.85	59.35	59.46	34.15
12	...	97.25	97.90	73.50	58.85	59.01	33.80	...	97.80	98.45	73.80	59.40	59.56	34.10
13	...	97.25	97.85	73.40	58.85	58.96	33.70	...	97.80	98.40	73.80	59.40	59.51	34.10
14	...	97.25	97.95	73.50	58.85	59.06	33.80	...	97.80	98.30	73.85	59.40	59.41	34.15
15	...	97.25	98.05	73.30	58.85	59.16	33.60	...	97.80	98.40	73.90	59.40	59.51	34.20
16	...							...	97.85	98.45	73.90	59.45	59.56	34.20
17	...	97.25	98.00	73.50	58.85	59.11	33.80	...	97.85	98.35	73.90	59.45	59.46	34.20
18	...	97.30	98.15	73.50	58.90	59.26	33.80	...	97.85	98.40	73.90	59.45	59.51	34.20
19	...	97.30	97.95	73.35	58.90	59.06	33.65	...	97.90	98.40	73.65	59.50	59.51	33.95
20	...	97.30	98.00	73.30	58.90	59.11	33.60	...	97.90	98.40	73.90	59.50	59.51	34.20
21	...	97.30	98.10	73.35	58.90	59.21	33.65	...	97.90	98.50	73.95	59.50	59.61	34.25
22	...	97.30	98.10	73.30	58.90	59.21	33.60	...	97.80	98.30	73.95	59.40	59.41	34.25
23	...	97.30	98.15	73.35	58.90	59.26	33.65	...	97.80	98.50	74.00	59.40	59.61	34.30
24	...	97.30	98.00	73.50	58.90	59.11	33.80	...	97.85	98.40	74.05	59.45	59.51	34.35
25	...	97.30	98.05	73.50	58.90	59.16	33.80	...	97.80	98.40	73.85	59.40	59.51	34.15
26	...	97.30	98.10	73.55	58.90	59.21	33.85	...	97.80	98.35	74.80	59.40	59.46	35.10
27	...	97.35	98.15	73.60	58.95	59.26	33.90	...	97.85	98.45	74.95	59.45	59.56	35.25
28	...	97.30	98.10	73.60	58.90	59.21	33.90	...	97.80	98.40	74.95	59.40	59.51	35.25
29	...	97.40	98.15	73.60	59.00	59.26	33.90	...	97.80	98.50	74.00	59.40	59.61	34.30
30	...	97.50	98.10	73.55	59.10	59.21	33.85	...	97.85	98.55	74.05	59.45	59.66	34.35
31	...	97.50	98.10	73.55	59.10	59.21	33.85	...	97.90	98.60	74.00	59.50	59.71	34.30

1. The reason back lake dropped, Lake of Woods Mill shut down. (May 17–31) (S.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—KEEWATIN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

SEPTEMBER 1912

Date	Footnote	Local Datum			Sea-level Datum			Footnote
		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water	
1	...	97.90	98.50	73.70	1059.50	1059.61	1034.00	...
2	...	97.90	98.50	73.80	59.50	59.61	34.10	...
3	...	97.95	98.60	74.00	59.55	59.71	34.30	...
4	...	97.95	98.60	74.00	59.55	59.71	34.30	3
5	...	97.95	98.55	74.20	59.55	59.66	34.50	...
6	1	97.00	98.75	74.00	58.60	59.86	34.30	...
7	...	97.00	98.60	74.05	58.60	59.71	34.35	...
8	...	97.00	98.65	73.85	58.60	59.76	34.15	...
9	...	97.00	98.65	73.95	58.60	59.76	34.25	...
10	...	97.00	98.65	74.00	58.60	59.76	34.30	...
11	...	98.10	98.75	74.05	59.70	59.86	34.35	...
12	...	98.10	98.75	74.05	59.70	59.86	34.35	...
13	...	98.15	98.85	74.10	59.75	59.96	34.40	...
14	...	98.10	98.80	74.10	59.70	59.91	34.40	...
15	...	98.10	98.70	74.10	59.70	59.81	34.40	...
16	...	98.20	98.85	74.00	59.80	59.96	34.30	...
17	...	98.20	98.80	74.05	59.80	59.91	34.35	...
18	...							
19	...	98.25	98.85	74.00	59.85	59.96	34.30	...
20	...	98.25	98.90	74.05	59.85	60.01	34.35	...
21	...	98.35	99.00	74.10	59.95	60.11	34.40	...
22	...	98.40	98.90	74.00	60.00	60.01	34.30	...
23	...	98.40	98.90	74.10	60.00	60.01	34.40	...
24	2	98.25	98.50	74.20	59.85	59.61	34.50	...
25	...	98.40	98.60	74.30	60.00	59.71	34.60	...
26	...	98.80	99.00	74.35	60.40	60.11	34.65	...
27	...	98.80	99.30	74.35	60.40	60.41	34.65	...
28	...	98.70	99.20	74.40	60.30	60.31	34.70	...
29	...	98.90	99.50	74.20	60.50	60.61	34.50	...
30	...	98.75	99.30	74.30	60.35	60.41	34.60	...
31	...							

OCTOBER

Date	Local Datum			Sea-level Datum		
	Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1	98.85	99.45	74.40	1060.45	1060.56	1034.70
2	98.90	99.50	74.40	60.50	60.61	34.70
3	98.90	99.45	74.45	60.50	60.56	34.75
4	98.65	99.45	75.00	60.25	60.56	35.30
5	98.55	99.40	75.35	60.15	60.51	35.65
6	98.50	99.40	75.30	60.10	60.51	35.60
7	98.80	99.70	75.70	60.40	60.81	36.00
8	98.70	99.60	75.55	60.30	60.71	36.15
9	98.60	99.30	75.85	60.20	60.41	36.15
10	98.65	99.50	76.00	60.25	60.61	36.30
11	98.70	99.60	76.10	60.30	60.71	36.40
12	98.70	99.60	76.10	60.30	60.71	36.40
13	98.75	99.80	75.95	60.35	60.91	36.25
14	98.60	99.50	76.05	60.20	60.61	36.35
15	98.65	99.75	76.15	60.25	60.86	36.45
16	98.70	99.80	76.30	60.30	60.91	36.60
17	98.70	99.70	76.55	60.30	60.81	36.85
18	98.70			60.30		
19	98.70	99.65	76.80	60.30	60.76	37.10
20	98.80	99.80	76.60	60.40	60.91	36.90
21	98.60	99.75	76.65	60.20	60.86	36.95
22	98.65	99.60	76.80	60.25	60.71	37.10
23	98.90	99.95	77.00	60.50	61.06	37.30
24	98.65	99.70	76.95	60.25	60.81	37.25
25	98.65	99.70	76.95	60.25	60.81	37.25
26	98.60	99.50	76.80	60.20	60.61	37.10
27	98.65	99.70	76.65	60.25	60.81	36.95
28	98.55	99.50	76.70	60.15	60.61	37.00
29	98.20	99.10	76.75	59.80	60.21	37.05
30	98.50	99.65	76.85	60.10	60.76	37.15
31	98.40	99.50	76.95	60.00	60.61	37.25

NOVEMBER 1912

Date	Footnote	Local Datum			Sea-level Datum			Footnote
		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water	
1	...	98.65	99.60	76.95	1060.25	1060.71	1037.25	...
2	...	98.60	99.70	77.00	60.20	60.81	37.30	...
3	...	98.55	99.70	76.75	60.15	60.81	37.05	...
4	...	98.65	99.55	76.85	60.25	60.66	37.15	...
5	...	98.70	99.65	76.95	60.30	60.76	37.25	...
6	...	98.80	99.75	76.95	60.40	60.86	37.25	...
7	...	99.05	99.70	76.90	60.65	60.81	37.20	...
8	...	98.95	99.45	76.20	60.55	60.56	36.50	...
9	...	99.05	99.75	76.10	60.65	60.86	36.40	...
10	...	99.00	99.60	75.80	60.60	60.71	36.10	...
11	...	99.00	99.50	75.70	60.60	60.61	36.00	...
12	...	98.70	99.50	75.95	60.30	60.61	36.25	...
13	...	98.70	99.60	76.50	60.30	60.71	36.80	...
14	...	98.70	99.75	76.70	60.30	60.86	37.00	...
15	...	98.75	99.80	76.75	60.35	60.91	37.05	...
16	...	98.60	99.50	76.70	60.20	60.61	37.00	...
17	...	98.60	99.50	76.65	60.20	60.61	36.95	...
18	...	98.65	99.80	76.70	60.25	60.91	37.00	...
19	...	98.65	99.70	76.75	60.25	60.81	37.05	...
20	...	98.65	99.70	76.80	60.25	60.81	37.10	...
21	...	98.60	99.70	76.80	60.20	60.81	37.10	...
22	...	98.60	99.60	76.85	60.20	60.71	37.15	...
23	...	98.50	99.40	76.90	60.10	60.51	37.20	...
24	...	98.60	99.70	76.80	60.20	60.81	37.10	...
25	...	98.60	99.55	76.85	60.20	60.66	37.15	...
26	...	98.50	99.40	76.90	60.10	60.51	37.20	...
27	...	98.55	99.50	76.00	60.15	60.61	36.30	...
28	...	98.75	99.95	76.10	60.35	61.06	36.40	...
29	...	98.60	99.50	76.00	60.20	60.61	36.30	...
30	4	98.60	99.50	76.00	60.20	60.61	36.30	...
31	...							

DECEMBER

Date	Local Datum			Sea-level Datum		
	Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1	98.60	99.55	76.90	1060.20	1060.66	1037.20
2	98.60	99.60	76.70	60.20	60.71	37.00
3	.....	99.50	76.80	.....	60.61	37.10
4	.....	99.55	76.80	.....	60.66	37.10
5	.....	99.50	76.80	.....	60.61	37.10
6	.....	99.50	76.80	.....	60.61	37.10
7	98.60	99.50	76.80	60.20	60.61	37.10
8	.....	99.50	76.90	.....	60.61	37.20
9	.....	99.50	76.90	.....	60.61	37.20
10	.....	99.50	76.95	.....	60.61	37.25
11	98.60	99.50	77.00	60.20	60.61	37.30
12	.....	99.50	77.00	.....	60.61	37.30
13	.....	99.50	77.00	.....	60.61	37.30
14	.....	99.50	77.00	.....	60.61	37.30
15	98.60	99.50	77.00	60.20	60.61	37.30
16	.....	99.50	77.00	.....	60.61	37.30
17	.....	99.50	77.00	.....	60.61	37.30
18	99.50	99.45	77.00	61.10	60.56	37.30
19	.....	99.45	77.00	.....	60.56	37.30
20	99.50	99.45	77.00	61.10	60.56	37.30
21	.....	99.45	77.00	.....	60.56	37.30
22	99.50	99.45	76.90	61.10	60.56	37.20
23	.....	99.45	76.80	.....	60.56	37.10
24	.....	99.45	76.90	.....	60.56	37.20
25	99.50	99.45	76.90	61.10	60.56	37.20
26	.....	99.45	76.95	.....	60.56	37.25
27	.....	99.45	76.95	.....	60.56	37.25
28	.....	99.45	76.95	.....	60.56	37.25
29	99.50	99.45	76.85	61.10	60.56	37.15
30	.....	99.45	76.90	.....	60.56	37.20
31	99.50	99.45	76.90	61.10	60.56	37.20

1. Very high wind. (M.) 2. Snowing and blowing. (M.) 3. Took out of Dam 20 Logs. Had the logs in the Dam from the 8 to the 11th; 29 logs out. (R. B.) 4. No snow on ground, lake still open. (M.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—KEEWATIN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	JANUARY 1913							FEBRUARY						
	Footnote	Local Datum			Sea-level Datum			Footnote	Local Datum			Sea-level Datum		
		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1			99.45	76.90		1060.52	1037.23			99.30	76.80		1060.37	1037.13
2		98.40	99.45	76.90	1060.00	60.52	37.23		98.30	99.30	76.80	1059.90	60.37	37.13
3			99.45	76.90		60.52	37.23			99.30	76.70		60.37	37.03
4			99.45	76.90		60.52	37.23			99.30	76.75		60.37	37.08
5		98.40	99.45	76.80	60.00	60.52	37.13		98.30	99.30	76.80	59.90	60.37	37.13
6			99.45	76.85		60.52	37.18			99.30	76.80		60.37	37.13
7			99.45	76.90		60.52	37.23			99.30	76.80		60.37	37.13
8		98.40	99.45	76.90	60.00	60.52	37.23			99.30	76.80		60.37	37.13
9			99.45	76.90		60.52	37.23		98.30	99.30	76.80	59.90	60.37	37.13
10			99.45	76.90		60.52	37.23			99.30	76.75		60.37	37.08
11			99.45	76.90		60.52	37.23			99.30	76.75		60.37	37.08
12		98.40	99.40	76.80	60.00	60.47	37.13			99.30	76.75		60.37	37.08
13			99.40	76.75		60.47	37.08	1	98.40	99.25	76.75	60.00	60.32	37.08
14		98.40	99.40	76.80	60.00	60.47	37.13			99.25	76.50		60.32	36.83
15			99.40	76.85		60.47	37.18			99.25	75.00		60.32	35.33
16		98.40	99.40	76.85	60.00	60.47	37.18		98.40	99.25	75.60	60.00	60.32	35.93
17			99.40	76.85		60.47	37.18			99.25	75.40		60.32	35.73
18			99.40	76.85		60.47	37.18		98.40	99.25	75.40	60.00	60.32	35.73
19		98.40	99.40	76.85	60.00	60.47	37.18			99.30	75.10		60.37	35.43
20			99.35	76.80		60.42	37.13		98.40	99.30	75.10	60.00	60.37	35.43
21			99.35	76.80		60.42	37.13			99.30	75.00		60.37	35.33
22			99.30	76.80		60.37	37.13			99.30	75.00		60.37	35.33
23		98.40	99.30	76.80	60.00	60.37	37.13		98.30	99.30	75.00	59.90	60.37	35.33
24			99.30	76.80		60.37	37.13			99.30	74.80		60.37	35.13
25			99.30	76.80		60.37	37.13			99.30	75.00		60.37	35.33
26		98.40	99.30	76.75	60.00	60.37	37.08			99.30	75.00		60.37	35.33
27			99.30	76.75		60.37	37.08		98.30	99.30	74.95	59.90	60.37	35.28
28			99.30	76.80		60.37	37.13			99.30	74.95		60.37	35.28
29			99.30	76.80		60.37	37.13							
30		98.40	99.30	76.80	60.00	60.37	37.13							
31			99.30	76.80		60.37	37.13							

Date	MARCH 1913							APRIL						
	Footnote	Local Datum			Sea-level Datum			Footnote	Local Datum			Sea-level Datum		
		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1			99.30	74.80		1060.37	1035.13			99.40	74.50		1060.47	1034.83
2		98.30	99.30	74.60	1059.90	60.37	34.93			99.35	74.55		60.42	34.88
3			99.30	74.65		60.37	34.98		98.30	99.35	74.50	1059.90	60.42	34.83
4			99.30	74.70		60.37	35.03			99.35	74.50		60.42	34.83
5			99.30	74.90		60.37	35.23			99.40	74.55		60.47	34.88
6		98.30	99.30	74.90	59.90	60.37	35.23		98.30	99.40	74.40	59.90	60.47	34.73
7			99.30	74.90		60.37	35.23			99.40	74.45		60.47	34.78
8			99.30	74.95		60.37	35.28			99.40	74.45		60.47	34.78
9		98.30	99.35	74.40	59.90	60.42	34.73			99.40	74.55		60.47	34.88
10			99.35	74.50		60.42	34.83		98.30	99.40	74.65	59.90	60.47	34.98
11			99.30	74.75		60.37	35.08			99.45	74.60		60.52	34.93
12			99.30	74.80		60.37	35.13			99.50	74.60		60.57	34.93
13		98.30	99.30	74.80	59.90	60.37	35.13		98.30	99.50	74.45	59.90	60.57	34.78
14			99.30	74.80		60.37	35.13	3		99.55	74.50		60.62	34.83
15			99.30	74.80		60.37	35.13			99.55	74.55		60.62	34.88
16		98.30	99.30	74.60	59.90	60.37	34.93			99.60	74.60		60.67	34.93
17			99.30	74.55		60.37	34.88		98.90	99.65	74.75	60.50	60.72	35.08
18			99.30	74.75		60.37	35.08			99.70	74.85		60.77	35.18
19			99.30	74.80		60.37	35.13			99.70	74.85		60.77	35.18
20		98.30	99.30	74.80	59.90	60.37	35.13		99.10	99.75	74.65	60.70	60.82	34.98
21			99.30	74.80		60.37	35.13		99.10	99.80	74.75	60.70	60.87	35.08
22			99.30	74.80		60.37	35.13		98.80	99.80	75.40	60.40	60.87	35.73
23		98.30	99.35	74.70	59.90	60.42	35.03		98.70	99.85	76.50	60.30	60.92	36.83
24			99.35	74.60		60.42	34.93		98.50	99.85	77.10	60.10	60.92	37.43
25	2		99.35	74.60		60.42	34.93		98.40	99.90	78.05	60.00	60.97	38.38
26		98.30	99.35	74.60	59.90	60.42	34.93		98.40	99.90	78.35	60.00	60.97	38.68
27			99.35	74.60		60.42	34.93		98.35	99.90	78.40	59.95	60.97	38.73
28			99.40	74.60		60.47	34.93		98.35	99.90	78.30	59.95	60.97	38.63
29			99.40	74.60		60.47	34.93		98.30	99.90	78.80	59.90	60.97	39.13
30		98.30	99.40	74.50	59.90	60.47	34.83		98.30	99.90	78.95	59.90	60.97	39.28
31			99.40	74.40		60.47	34.73							

1. Feb. 13th 14th 15th put in 28 logs at Dam. (R. B.)
2. Mill shut down on Tuesday, Mar. 25, for rest of week. (R. B.)
3. April—Taken 77 stop-logs out of Dam from 14–18. (R. B.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—KEEWATIN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	MAY 1913							JUNE					
	Footnote	Local Datum			Sea-level Datum			Footnote	Local Datum			Sea-level Datum		
		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1	1	98.25	99.85	79.00	1059.85	1060.92	1039.33	...	97.05	99.80	80.70	1058.65	1060.87	1041.03
2	...	98.20	99.85	79.05	59.80	60.92	39.38	...	97.10	99.90	80.65	58.70	60.97	40.98
3	...	98.25	99.95	79.10	59.85	61.02	39.43	...	97.05	99.80	80.90	58.65	60.87	41.23
4	...	98.35	100.10	79.00	59.95	61.17	39.33	...	97.15	100.00	81.00	58.75	61.07	41.33
5	...	98.25	100.00	78.95	59.85	61.07	39.28	...	97.15	99.90	81.00	58.75	60.97	41.33
6	...	98.25	100.00	79.25	59.85	61.07	39.58	...	97.00	99.50	81.00	58.60	60.57	41.33
7	...	98.25	100.00	79.35	59.85	61.07	39.68	...	97.05	99.80	81.00	58.65	60.87	41.33
8	...	98.20	99.80	79.35	59.80	60.87	39.68	...	97.10	99.90	80.90	58.70	60.97	41.23
9	...	98.20	99.95	79.35	59.80	61.02	39.68	...	97.15	100.00	80.80	58.75	61.07	41.13
10	...	98.30	100.00	79.40	59.90	61.07	39.73	...	97.20	100.00	81.00	58.80	61.07	41.33
11	...	98.30	100.20	79.20	59.90	61.27	39.53	...	97.20	99.95	81.05	58.80	61.02	41.38
12	...	98.20	100.00	79.10	59.80	61.07	39.43	...	97.10	99.90	81.10	58.70	60.97	41.43
13	...	97.80	99.90	79.75	59.40	60.97	40.08	...	97.05	99.90	81.00	58.65	60.97	41.33
14	...	97.40	100.00	80.00	59.00	61.07	40.33	...	97.05	99.90	81.00	58.65	60.97	41.33
15	...	97.20	99.90	80.35	58.80	60.97	40.68	...	97.05	99.90	80.70	58.65	60.97	41.03
16	...	.....	.....	.....	.....	.....	.....	...	97.05	99.80	80.80	58.65	60.87	41.13
17	...	97.10	99.85	80.60	58.70	60.92	40.93	...	97.05	99.80	80.80	58.65	60.87	41.13
18	...	97.10	99.90	80.50	58.70	60.97	40.83	...	97.00	99.80	80.90	58.60	60.87	41.23
19	...	97.15	99.95	80.50	58.75	61.02	40.83	...	97.00	99.75	81.00	58.60	60.82	41.33
20	...	97.10	99.95	80.60	58.70	61.02	40.93	...	96.95	99.65	81.00	58.55	60.72	41.33
21	...	97.05	99.85	80.60	58.65	60.92	40.93	...	97.00	99.70	80.95	58.60	60.77	41.28
22	...	97.10	99.95	80.70	58.70	61.02	41.03	...	97.00	99.80	80.65	58.60	60.87	40.98
23	...	97.15	100.00	80.75	58.75	61.07	41.08	...	97.00	99.80	80.70	58.60	60.87	41.03
24	...	97.10	99.80	80.70	58.70	60.87	41.03	...	97.00	99.80	80.70	58.60	60.87	41.03
25	...	97.20	100.00	80.70	58.80	61.07	41.03	...	97.00	99.80	80.90	58.60	60.87	41.23
26	...	97.20	100.05	80.60	58.80	61.12	40.93	...	96.85	99.50	80.80	58.45	60.57	41.13
27	...	97.10	99.90	80.70	58.70	60.97	41.03	...	96.80	99.50	80.85	58.40	60.57	41.18
28	...	97.15	99.90	80.70	58.75	60.97	41.03	...	96.95	99.70	80.90	58.55	60.77	41.23
29	...	97.20	99.95	80.75	58.80	61.02	41.08	...	97.00	99.90	80.65	58.60	60.97	40.98
30	...	97.10	99.80	80.80	58.70	60.87	41.13	...	97.00	99.85	80.55	58.60	60.92	40.88
31	...	97.20	100.00	80.80	58.80	61.07	41.13	...	.....	.....	.....	.....	.....	.....

Date	JULY 1913							AUGUST					
	Footnote	Local Datum			Sea-level Datum			Footnote	Local Datum			Sea-level Datum		
		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1	...	96.85	99.55	80.60	58.45	1060.62	1040.93	...	98.00	99.85	79.35	1059.60	1060.92	1039.68
2	...	97.00	99.70	80.60	58.60	60.77	40.93	...	98.00	99.80	79.40	59.60	60.87	39.73
3	...	97.05	99.75	80.75	58.65	60.82	41.08	...	97.90	99.75	79.20	59.50	60.82	39.53
4	...	97.00	99.50	80.75	58.60	60.57	41.08	...	97.90	99.80	79.15	59.50	60.87	39.48
5	...	96.90	99.40	80.75	58.50	60.47	41.08	...	97.80	99.55	79.30	59.40	60.62	39.63
6	...	97.00	99.65	80.65	58.60	60.72	40.98	...	97.90	99.75	79.30	59.50	60.82	39.63
7	2	96.90	99.60	80.55	58.50	60.67	40.88	...	97.20	99.90	79.35	58.80	60.97	39.68
8	...	97.50	99.60	80.20	59.10	60.67	40.53	...	98.00	99.90	79.35	59.60	60.97	39.68
9	...	97.70	99.50	79.90	59.30	60.57	40.23	...	98.00	99.60	79.35	59.60	60.67	39.68
10	...	97.90	99.55	79.10	59.50	60.62	39.43	...	97.90	99.60	79.30	59.50	60.67	39.63
11	...	98.40	99.75	79.00	60.00	60.82	39.33	...	98.00	99.60	79.10	59.60	60.67	39.43
12	...	98.45	99.80	78.85	60.05	60.87	39.18	...	97.95	99.75	79.25	59.55	60.82	39.58
13	...	98.50	99.75	78.60	60.10	60.82	38.93	...	97.90	99.70	79.30	59.50	60.77	39.63
14	...	98.50	99.70	78.30	60.10	60.77	38.63	...	97.90	99.70	79.25	59.50	60.77	39.58
15	...	98.55	99.80	78.45	60.15	60.87	38.73	...	97.70	99.65	79.35	59.30	60.72	39.68
16	...	98.55	99.80	78.50	60.15	60.87	38.83	...	97.90	99.70	79.40	59.50	60.77	39.73
17	...	98.60	99.85	78.45	60.20	60.92	38.78	...	97.90	99.65	79.25	59.50	60.72	39.58
18	...	98.55	99.85	78.45	60.15	60.92	38.78	...	97.80	99.65	79.00	59.40	60.72	39.33
19	...	98.60	99.70	78.40	60.20	60.77	38.73	...	97.95	99.75	79.10	59.55	60.82	39.43
20	...	98.70	99.90	78.15	60.30	60.97	38.48	...	97.80	99.65	79.10	59.40	60.72	39.43
21	...	98.80	100.00	78.05	60.40	61.07	38.38	...	97.80	99.65	79.15	59.40	60.72	39.48
22	3	98.75	99.90	78.25	60.35	60.97	38.58	...	97.85	99.60	79.10	59.45	60.67	39.43
23	...	98.60	99.80	78.20	60.20	60.87	38.53	...	97.70	99.55	79.10	59.30	60.62	39.43
24	...	98.20	99.90	78.10	59.80	60.97	38.43	...	97.70	99.70	79.00	59.30	60.77	39.33
25	...	98.00	100.00	79.10	59.60	61.07	39.43	...	97.70	99.60	79.00	59.30	60.67	39.33
26	...	98.15	99.95	79.25	59.75	61.02	39.58	...	97.70	99.50	79.00	59.30	60.57	39.33
27	...	98.10	99.80	79.10	59.70	60.87	39.43	...	97.80	99.65	78.95	59.40	60.72	39.28
28	...	98.10	100.00	79.00	59.70	61.07	39.33	...	97.70	99.45	78.95	59.30	60.52	39.28
29	...	98.10	99.90	79.25	59.70	60.97	39.58	...	97.70	99.40	78.90	59.30	60.47	39.23
30	...	98.10	99.90	79.30	59.70	60.97	39.63	...	97.80	99.50	78.95	59.40	60.57	39.28
31	...	98.10	99.85	79.40	59.70	60.92	39.73	...	97.70	99.50	78.85	59.30	60.57	39.18

1. May—20 logs out. (R. B.) 2. July—Put in 58 logs on the 7th-9th. (R. B.)
3. Took out again 24 logs on 22-28. (R. B.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—KEEWATIN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	SEPTEMBER 1913							OCTOBER					
	Footnote	Local Datum			Sea-level Datum			Footnote	Local Datum			Sea-level Datum		
		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1	...	97.70	99.55	78.80	1059.30	1060.62	1039.13	...	98.10	98.85	76.20	1059.70	1059.92	1036.53
2	...	97.70	99.45	78.80	59.30	60.52	39.13	...	98.15	98.95	76.10	59.75	60.02	36.43
3	...	97.70	99.40	78.80	59.30	60.47	39.13	...	98.05	98.85	76.05	59.65	59.92	36.38
4	...	97.70	99.45	78.85	59.30	60.52	39.18	...	98.00	98.80	76.00	59.60	59.87	36.33
5	...	97.65	99.40	78.80	59.25	60.47	39.13	...	97.80	98.45	75.80	59.40	59.52	36.13
6	...	97.70	99.40	78.80	59.30	60.47	39.13	...	98.20	98.80	75.50	59.80	59.87	35.83
7	...	97.60	99.35	78.65	59.20	60.42	38.98	...	98.50	99.20	75.80	60.10	60.27	36.13
8	...	97.60	99.30	78.70	59.20	60.37	39.03	...	98.15	98.85	75.80	59.75	59.92	36.13
9	...	97.80	99.60	78.80	59.40	60.67	39.13	...	98.10	98.80	75.80	59.70	59.87	36.13
10	...	97.60	99.30	78.80	59.20	60.37	39.13	...	98.40	98.15	75.80	60.00	59.22	36.13
11	...	97.55	99.30	78.90	59.15	60.37	39.23	...	98.40	99.10	75.85	60.00	60.17	36.18
12	...	97.60	99.20	78.90	59.20	60.27	39.23	...	98.30	99.00	75.60	59.90	60.07	35.93
13	...	97.60	99.20	78.90	59.20	60.27	39.23	...	98.30	99.10	75.35	59.90	60.17	35.68
14	...	97.75	99.60	78.75	59.35	60.67	39.08	...	98.30	99.05	75.65	59.90	60.12	35.98
15	...	97.60	99.30	78.65	59.20	60.37	38.98	...	98.30	99.00	75.70	59.90	60.07	36.03
16	...	97.55	99.10	78.80	59.15	60.17	39.13	...	98.30	99.00	75.70	59.90	60.07	36.03
17	...	97.50	99.15	78.80	59.10	60.22	39.13	...	98.35	99.20	75.75	59.95	60.27	36.08
18	...	97.55	99.35	78.85	59.15	60.42	39.18	...	98.30	99.05	75.70	59.90	60.12	36.03
19	...	97.50	99.25	78.95	59.10	60.32	39.28	...	98.00	98.75	75.50	59.60	59.82	35.83
20	...	97.20	98.60	78.80	58.80	59.67	39.13	...	98.00	98.80	75.20	59.60	59.87	35.53
21	...	97.15	98.50	78.50	58.75	59.57	38.83	...	98.15	99.05	75.25	59.75	60.12	35.58
22	...	97.35	99.00	78.50	58.95	60.07	38.83	...	98.40	99.15	75.55	60.00	60.22	35.88
23	1	98.00	99.00	78.50	59.60	60.07	38.83	...	98.30	99.05	75.60	59.90	60.12	35.93
24	...	97.95	98.90	77.60	59.55	59.97	37.93	...	98.30	99.00	75.65	59.90	60.07	35.98
25	...	97.95	98.90	77.40	59.55	59.97	37.73	...	98.30	99.00	75.65	59.90	60.07	35.98
26	...	97.90	99.00	77.35	59.50	60.07	37.68	...	98.20	98.90	75.45	59.80	59.97	35.78
27	...	98.30	99.10	77.15	59.90	60.17	37.48	...	98.50	99.20	75.20	60.10	60.27	35.53
28	...	98.20	99.00	76.30	59.80	60.07	36.63	...	98.05	98.55	75.55	59.65	59.62	35.88
29	...	98.10	98.85	76.30	59.70	59.92	36.63	...	98.30	99.00	75.60	59.90	60.07	35.93
30	...	98.20	99.00	76.30	59.80	60.07	36.63	...	98.30	99.05	75.65	59.90	60.12	35.98
31	...							...	98.30	99.15	75.65	59.90	60.22	35.98

Date	NOVEMBER 1913							DECEMBER					
1	...	98.30	99.15	75.65	1059.90	1060.22	1035.98	...	98.30	99.05	75.20	1059.90	1060.12	1035.53
2	...	98.40	99.20	75.40	60.00	60.27	35.73	...	98.30	99.00	75.50	59.90	60.07	35.83
3	...	98.10	98.90	75.20	59.70	59.97	35.53	...	98.40	99.10	75.60	60.00	60.17	35.93
4	...	98.30	99.15	75.50	59.90	60.22	35.83	2	98.40	99.15	75.60	60.00	60.22	35.93
5	...	98.35	99.20	75.55	59.95	60.27	35.88	...	98.30	99.00	75.65	59.90	60.07	35.98
6	...	98.30	99.05	75.60	59.90	60.12	35.93	...	98.05	98.90	75.65	59.65	59.97	35.98
7	...	98.20	98.75	75.65	59.80	59.82	35.98	3	98.00	98.80	75.50	59.60	59.87	35.83
8	...	98.20	98.90	75.65	59.80	59.97	35.98	...	98.25	99.10	75.30	59.85	60.17	35.63
9	...	98.10	98.90	75.45	59.70	59.97	35.78	...	98.30	99.05	75.50	59.90	60.12	35.83
10	...	98.15	98.90	75.20	59.75	59.97	35.53	...	98.30	99.00	75.60	59.90	60.07	35.93
11	...	98.40	99.20	75.55	60.00	60.27	35.88	...	98.30	99.00	75.60	59.90	60.07	35.93
12	...	98.35	99.00	75.60	59.95	60.07	35.93	...	98.30	99.00	75.65	59.90	60.07	35.98
13	...	98.35	99.00	75.60	59.95	60.07	35.93	...	98.30	99.00	75.65	59.90	60.07	35.98
14	...	98.30	99.00	75.65	59.90	60.07	35.98	...	98.30	99.05	75.35	59.90	60.12	35.68
15	...	98.30	99.05	75.65	59.90	60.12	35.98	...	98.30	99.00	75.20	59.90	60.07	35.53
16	...	98.40	99.20	75.40	60.00	60.27	35.73	...	98.30	99.05	75.40	59.90	60.12	35.73
17	...	98.30	99.05	75.25	59.90	60.12	35.58	...	98.30	99.00	75.45	59.90	60.07	35.78
18	...	98.20	98.90	75.55	59.80	59.97	35.88	...	98.30	99.00	75.55	59.90	60.07	35.88
19	...	98.40	99.10	75.60	60.00	60.17	35.93	...	98.30	99.00	75.50	59.90	60.07	35.83
20	...	98.35	99.00	75.60	59.95	60.07	35.93	...	98.30	99.00	75.50	59.90	60.07	35.83
21	...	98.30	99.00	75.65	59.90	60.07	35.98	...	98.30	99.00	75.30	59.90	60.07	35.63
22	...	98.25	99.00	75.65	59.85	60.07	35.98	...	98.30	99.00	75.10	59.90	60.07	35.43
23	...	98.40	99.15	75.40	60.00	60.22	35.73	...	98.30	99.00	75.40	59.90	60.07	35.73
24	...	98.45	99.05	75.20	60.05	60.12	35.53	...	98.30	99.00	75.50	59.90	60.07	35.83
25	...	98.20	98.95	75.50	59.80	60.02	35.83	...	98.30	99.00	75.50	59.90	60.07	35.83
26	...	98.25	98.95	75.60	59.85	60.02	35.93	...	98.30	99.00	75.30	59.90	60.07	35.63
27	...	98.35	99.10	75.60	59.95	60.17	35.93	...	98.30	99.00	75.50	59.90	60.07	35.83
28	...	98.25	99.00	75.60	59.85	60.07	35.93	...	98.30	99.05	75.30	59.90	60.12	36.63
29	...	98.30	99.05	75.65	59.90	60.12	35.98	...	98.30	99.00	75.25	59.90	60.07	35.58
30	...	98.30	99.05	75.40	59.90	60.12	35.73	...	98.30	99.00	75.50	59.90	60.07	35.83
31	...							...	98.30	99.00	75.55	59.90	60.07	35.88

1. September—70 stop-logs replaced in Dam from Sept. 23–30, 7 new logs replaced. (R. B.)
2. No ice on lake. (M.)
3. Bay frozen over. (M.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—KEEWATIN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	JANUARY 1914							FEBRUARY					
	Footnote	Local Datum			Sea-level Datum			Footnote	Local Datum			Sea-level Datum		
		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1		98.30	99.05	75.60	1059.90	1060.12	1035.93			99.00	75.30		1060.07	1035.63
2			99.00	75.60		60.07	35.93		98.25	99.00	75.15	1059.85	60.07	35.48
3		98.30	99.00	75.60	59.90	60.07	35.93			99.00	75.45		60.07	35.78
4			99.00	75.50		60.07	35.83			99.00	75.45		60.07	35.78
5			99.00	75.30		60.07	35.63		98.25	99.00	75.50	59.85	60.07	35.83
6			99.00	75.40		60.07	35.73			99.00	75.50		60.07	35.83
7		98.30	99.00	75.50	59.90	60.07	35.83			99.00	75.35		60.07	35.68
8			98.95	75.55		60.02	35.88			99.05	75.30		60.12	35.63
9			99.00	75.60		60.07	35.93		98.25	99.05	75.20	59.85	60.12	35.53
10			99.00	75.60		60.07	35.93			99.00	75.40		60.07	35.73
11		98.25	99.00	75.40	59.85	60.07	35.73			99.00	75.40		60.07	35.73
12			99.00	75.20		60.07	35.53		98.25	99.00	75.50	59.85	60.07	35.83
13			99.00	75.55		60.07	35.88			99.00	75.50		60.07	35.83
14		98.25	99.00	75.55	59.85	60.07	35.88			99.00	75.50		60.07	35.83
15			99.00	75.60		60.07	35.93			99.00	75.50		60.07	35.83
16			99.00	75.60		60.07	35.93		98.25	99.00	75.20	59.85	60.07	35.53
17		98.25	99.00	75.50	59.85	60.07	35.83		98.25	99.00	75.40	59.85	60.07	35.73
18			99.00	75.35		60.07	35.68			99.00	75.50		60.07	35.83
19			98.95	75.15		60.02	35.48			99.00	75.50		60.07	35.83
20		98.25	98.95	75.30	59.85	60.02	35.63	1	98.25	99.00	75.50	59.85	60.07	35.83
21			99.00	75.45		60.07	35.78		98.15	99.00	75.65	59.75	60.07	35.98
22			99.00	75.30		60.07	35.63		98.15	99.00	75.60	59.75	60.07	35.93
23			99.00	75.30		60.07	35.63		98.05	99.00	75.55	59.65	60.07	35.88
24		98.25	99.00	75.30	59.85	60.07	35.63		98.05	99.00	76.00	59.65	60.07	36.33
25			99.00	75.25		60.07	35.58		98.00	99.00	76.40	59.60	60.07	36.73
26			99.00	75.15		60.07	35.48		97.95	99.00	76.60	59.55	60.07	36.93
27			98.95	75.40		60.02	35.73		97.95	99.00	76.70	59.55	60.07	37.03
28		98.25	98.95	75.40	59.85	60.02	35.73		97.90	99.00	76.80	59.50	60.07	37.13
29			98.95	75.45		60.02	35.78							
30			99.00	75.50		60.07	35.83							
31		98.25	99.00	75.50	59.85	60.07	35.83							

Date	MARCH 1914							APRIL					
	Footnote	Local Datum			Sea-level Datum			Footnote	Local Datum			Sea-level Datum		
		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1			99.00	76.60		1060.07	1036.93		97.85	98.80	76.75	1059.45	1059.87	1037.08
2			99.00	76.50		60.07	36.83			98.80	76.80		59.87	37.13
3		97.80	98.95	76.80	1059.40	60.02	37.13			98.80	76.80		59.87	37.13
4			98.95	76.80		60.02	37.13		97.85	98.80	76.85	59.45	59.87	37.18
5		97.80	98.95	76.80	59.40	60.02	37.13			98.80	76.70		59.87	37.03
6			98.90	76.80		59.97	37.13			98.80	76.55		59.87	36.88
7		97.80	98.90	76.85	59.40	59.97	37.18		97.85	98.80	76.70	59.45	59.87	37.03
8			98.95	76.80		60.02	37.13			98.80	76.80		59.87	37.13
9			98.90	76.60		59.97	36.93		97.85	98.80	76.70	59.45	59.87	37.03
10			98.90	76.80		59.97	37.13			98.80	76.60		59.87	36.93
11		97.80	98.90	76.90	59.40	59.97	37.23			98.85	76.55		59.92	36.88
12			98.90	76.95		59.97	37.28		97.85	98.80	76.40	59.45	59.87	36.73
13			98.90	76.95		59.97	37.28			98.80	76.30		59.87	36.63
14		97.80	98.90	76.95	59.40	59.97	37.28			98.80	76.50		59.87	36.83
15			98.90	76.70		59.97	37.03		97.85	98.80	76.75	59.45	59.87	37.08
16			98.90	76.60		59.97	36.93			98.80	76.80		59.87	37.13
17		97.80	98.90	76.85	59.40	59.97	37.18			98.80	76.60		59.87	36.93
18			98.90	76.90		59.97	37.23			98.80	76.60		59.87	36.93
19		97.85	98.85	76.90	59.45	59.92	37.23		97.90	98.90	76.55	59.50	59.97	36.88
20			98.85	76.90		59.92	37.23			98.90	76.50		59.97	36.83
21			98.85	76.95		59.92	37.28			98.90	76.80		59.97	37.13
22		97.85	98.90	76.70	59.45	59.97	37.03		97.90	98.95	76.90	59.50	60.02	37.23
23			98.85	76.55		59.92	36.88			98.95	76.80		60.02	37.13
24			98.85	76.80		59.92	37.13		97.95	99.00	76.70	59.55	60.07	37.03
25		97.85	98.85	76.90	59.45	59.92	37.23			99.05	76.70		60.12	37.03
26			98.85	76.90		59.92	37.23		98.00	99.15	76.60	59.60	60.22	36.93
27			98.85	76.90		59.92	37.23			99.00	76.60		60.07	36.93
28		97.85	98.85	76.90	59.45	59.92	37.23			99.00	76.80		60.07	37.13
29			98.85	76.75		59.92	37.08		97.95	99.05	76.90	59.55	60.12	37.23
30		97.85	98.85	76.45	59.45	59.92	36.78			99.10	76.95		60.17	37.28
31			98.80	76.70		59.87	37.03							

1. Have taken out 35 logs from the 20th to 26th Feb. (S.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—KEEWATIN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	Footnote	May 1914 — Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water	Footnote	June 1914 — Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water
1	1	98.00	99.10	76.95	1059.60	1060.17	1037.28	...	97.80	99.80	79.40	1059.40	1060.87	1039.75
2	...	.....	99.10	76.95	.....	60.17	37.28	...	97.85	100.00	79.65	59.45	61.07	40.00
3	...	98.15	99.20	76.80	59.75	60.27	37.13	...	.....	99.80	80.00	.....	60.87	40.35
4	...	.....	99.20	76.80	.....	60.27	37.13	...	97.75	99.80	9.95	59.35	60.87	40.30
5	...	98.25	99.20	77.00	59.85	60.27	37.33	...	.....	100.00	80.00	.....	61.07	40.35
6	...	.....	99.25	77.10	.....	60.32	37.43	...	97.80	100.00	80.00	59.40	61.07	40.35
7	...	98.30	99.30	77.35	59.90	60.37	37.68	...	.....	100.00	79.90	.....	61.07	40.25
8	...	.....	99.35	77.35	.....	60.42	37.68	...	98.95	100.00	79.80	60.55	61.07	40.15
9	...	.....	99.35	77.40	.....	60.42	37.73	...	.....	100.10	80.20	.....	61.17	40.55
10	...	98.40	99.35	77.20	60.00	60.42	37.53	...	100.05	100.20	80.45	61.65	61.27	40.80
11	...	.....	99.35	77.10	.....	60.42	37.43	...	.....	100.10	80.40	.....	61.17	40.75
12	...	.....	99.45	77.30	.....	60.52	37.63	...	.....	100.20	80.50	.....	61.27	40.85
13	...	.....	99.35	77.45	.....	60.42	37.78	...	98.10	100.20	80.45	59.70	61.27	40.80
14	...	98.45	99.45	77.50	60.05	60.52	37.83	...	.....	100.10	80.30	.....	61.17	40.65
15	...	.....	99.50	77.50	.....	60.57	37.83	...	98.00	100.20	80.15	59.60	61.27	40.50
16	...	.....	99.55	77.50	.....	60.62	37.83	...	.....	100.25	80.40	.....	61.32	40.75
17	...	98.55	99.60	77.40	60.15	60.67	37.73	2	98.10	100.30	80.50	59.70	1061.37	40.85
18	...	.....	99.60	77.30	.....	60.67	37.63	...	98.00	100.00	80.60	59.60	61.07	40.95
19	...	98.50	99.50	77.45	60.10	60.57	37.78	...	98.00	100.30	80.70	59.60	61.37	41.05
20	...	.....	99.60	77.60	.....	60.67	37.93	...	98.00	100.30	80.75	59.60	61.37	41.10
21	...	98.50	99.60	77.70	60.10	60.67	38.03	...	98.00	100.10	80.60	59.60	61.17	40.95
22	...	98.30	99.60	78.20	59.90	60.67	38.53	...	97.90	100.15	80.45	59.50	61.22	40.80
23	...	.....	99.70	78.40	.....	60.77	38.73	...	97.55	100.25	80.80	59.15	61.32	41.15
24	...	98.35	99.75	78.30	59.95	60.82	38.63	...	97.40	100.05	81.00	59.00	61.12	41.35
25	...	.....	99.80	78.30	.....	60.87	38.63	...	97.30	100.05	81.10	58.90	61.12	41.45
26	...	98.35	99.80	78.50	59.95	60.87	38.83	...	97.30	100.05	81.10	58.90	61.12	41.45
27	...	98.10	99.80	78.65	59.70	60.87	38.98	...	97.30	99.85	81.10	58.90	60.92	41.45
28	...	97.95	99.80	79.00	59.55	60.87	39.33	...	97.30	100.10	81.00	58.90	61.17	41.35
29	...	97.85	99.85	79.45	59.45	60.92	39.78	...	97.30	100.10	81.05	58.90	61.17	41.40
30	...	97.90	99.90	79.55	59.50	60.97	39.88	...	97.30	100.10	81.05	58.90	61.17	41.40
31	...	97.90	99.80	79.50	59.50	60.87	39.83	...	.....	.....	.....	.....	.....	.....

Date	Footnote	July 1914 — Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water	Footnote	August 1914 — Local Datum: Above Dam	Lake	Tail Water	Sea-level Datum: Above Dam	Lake	Tail Water
1	...	.....	100.05	80.70	.....	1061.12	1041.07	...	97.05	99.90	81.00	1058.65	1060.97	1041.37
2	...	97.25	100.10	80.80	1058.85	61.17	41.17	...	97.10	100.00	80.85	58.70	61.07	41.22
3	...	.....	100.05	80.90	.....	61.12	41.27	...	97.00	99.80	80.70	58.60	60.87	41.07
4	...	97.00	100.05	80.90	58.60	61.12	41.27	...	97.00	99.80	80.85	58.60	60.87	41.22
5	...	.....	100.10	80.80	.....	61.17	41.17	...	97.00	99.80	80.90	58.60	60 87	41.27
6	...	.....	100.15	80.80	.....	61.22	41.17	...	96.90	99.60	80.80	58.50	60.67	41.17
7	...	97.10	99.80	80.90	58.70	60.87	41.27	...	.....	99.70	80.80	.....	60.77	41.17
8	...	.....	99.90	80.95	.....	60.97	41.32	...	96.90	99.70	80.80	58.50	60.77	41.17
9	...	97.10	99.90	81.00	58.70	60.97	41.37	...	.....	99.70	80.60	.....	60.77	40.97
10	...	.....	100.00	81.10	.....	61.07	41.47	...	96.80	99.30	80.40	58.40	60.37	40.77
11	...	97.15	100.00	81.00	58.75	61.07	41.37	...	.....	99.55	80.60	.....	60.62	40.97
12	...	.....	99.95	80.90	.....	61.02	41.27	...	96.80	99.60	80.60	58.40	60.67	40.97
13	...	97.15	100.00	80.85	58.75	61 07	41.22	...	.....	99.40	80.60	.....	60.47	40.97
14	...	.....	100.10	81.05	.....	61.17	41.42	...	96.80	99.40	80.55	58.40	60.47	40.92
15	...	.....	100.15	81.10	.....	61.22	41.47	...	96.80	99.45	80.60	58.40	60.52	40.97
16	...	97.20	100.20	81.15	58.80	61.27	41.52	...	96.80	99.45	80.70	58.40	60.52	41.07
17	...	97.10	99.90	81.20	58.70	60.97	41.57	...	96.80	99.40	80.30	58.40	60.47	40.67
18	...	97.10	100.05	81.30	58.70	61.12	41.67	...	96.80	99.35	80.50	58.40	60.42	40.87
19	...	97.10	100.10	81.10	58.70	61.17	41.47	...	.....	99.35	80.50	.....	60.42	40.87
20	...	.....	100.15	80.95	.....	61.22	41.32	...	96.70	99.35	80.50	58.30	60.42	40.87
21	...	97.10	100.10	81.10	58.70	61.17	41.47	...	.....	99.30	80.55	.....	60.37	40.92
22	...	.....	100.05	81.15	.....	61.12	41.52	...	96.65	99.35	80.55	58.25	60.42	40.92
23	...	97.10	100.05	81.15	58.70	61.12	41.52	...	.....	99.05	80.40	.....	60.12	40.77
24	...	.....	100.05	81.15	.....	61.12	41.52	...	96.60	99.20	80.20	58.20	60.27	40.57
25	...	97.10	100.05	81.15	58.70	61.12	41.52	...	96.80	99.05	80.20	58.40	60.12	40.57
26	...	.....	100.10	81.00	.....	61.17	41.37	...	97.40	99.20	80.05	59.00	60.27	40.42
27	...	97.05	99.95	80.80	58.65	61.02	41.17	...	97.85	99.30	79.65	59.45	60.37	40.02
28	...	.....	100.05	80.95	.....	61.12	41.32	...	98.00	99.40	79.20	59.60	60.47	39.57
29	...	97.10	100.00	81.05	58.70	61.07	41.42	...	98.00	99.35	79.00	59.60	60.42	39.37
30	...	.....	99.95	81.10	.....	61.02	41.47	...	98.00	99.35	78.80	59.60	60.42	39.17
31	...	97.05	99.90	81.00	58.65	60.97	41.37	...	98.00	99.30	78.75	59.60	60.37	39.12

1. May. Have taken out 75 logs. (S.) 72 logs out May 31. (Engrs.)
2. June. Removed 23 stop logs 17–25,—95 logs out. (S.)

* TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—KEEWATIN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	SEPTEMBER 1914							OCTOBER						
	Footnote	Local Datum			Sea-level Datum			Footnote	Local Datum			Sea-level Datum		
		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1			99.30	78.65		1060.37	1039.02			99.50	78.35		1060.57	1038.72
2		97.95	99.20	78.50	1059.55	60.27	38.87		98.05	99.45	78.35	1059.65	60.52	38.72
3			98.90	78.40		59.97	38.77			99.40	78.35		60.47	38.72
4		97.95	99.20	78.60	59.55	60.27	38.97		98.00	99.40	78.15	59.60	60.47	38.52
5			99.20	78.40		60.27	38.77			99.40	78.00		60.47	38.37
6			99.20	78.35		60.27	38.72		98.00	99.35	78.20	59.60	60.42	38.57
7		97.90	99.10	78.25	59.50	60.17	38.62			99.30	78.20		60.37	38.57
8			99.15	78.25		60.22	38.62		98.00	99.30	78.20	59.60	60.37	38.57
9		98.00	99.30	78.30	59.60	60.37	38.67			99.30	78.20		60.37	38.57
10			99.20	78.35		60.27	38.72		97.95	99.30	78.25	59.55	60.37	38.62
11			99.25	78.30		60.32	38.67			99.35	78.30		60.42	38.67
12		98.00	99.40	78.35	59.60	60.47	38.72		98.00	99.40	78.15	59.60	60.47	38.52
13		98.10	99.35	78.20	59.70	60.62	38.57		98.10	99.45	78.15	59.70	60.52	38.52
14			99.30	78.10		60.37	38.47		98.25	99.65	78.30	59.85	60.72	38.67
15			99.35	78.35		60.42	38.72		98.60	99.45	77.60	60.20	60.52	37.97
16			99.25	78.40		60.32	38.77		98.80	99.70	77.40	60.40	60.77	37.77
17		98.00	99.35	78.45	59.60	60.42	38.82			99.45	77.25		60.52	37.62
18			99.50	78.40		60.57	38.77		98.80	99.75	77.00	60.40	60.82	37.37
19		98.10	99.60	78.50	59.70	60.67	38.87			99.55	76.80		60.62	37.17
20			99.45	78.30		60.52	38.67		98.70	99.60	77.00	60.30	60.67	37.37
21		98.05	99.40	78.20	59.65	60.47	38.57		98.60	99.50	77.00	60.20	60.57	37.37
22			99.25	78.40		60.32	38.77		98.70	99.55	77.00	60.30	60.62	37.37
23			99.40	78.45		60.47	38.82		98.50	99.25	77.05	60.10	60.32	37.42
24		97.90	99.25	78.45	59.50	60.32	38.82			99.65	76.90		60.72	37.27
25			99.45	78.50		60.52	38.87		98.50	99.50	76.60	60.10	60.57	36.97
26		98.00	99.45	78.45	59.60	60.52	38.82		98.50	99.40	76.40	60.10	60.47	36.77
27			99.40	78.25		60.47	38.62			99.75	76.75		60.82	37.12
28		98.00	99.35	78.15	59.60	60.42	38.52		98.55	99.45	76.70	60.15	60.52	37.07
29			99.30	78.30		60.37	38.67			99.50	76.70		60.57	37.07
30		98.00	99.35	78.35	59.60	60.42	38.72			99.70	76.80		60.77	37.17
31									98.55	99.70	76.80	60.15	60.77	37.17

Date	NOVEMBER 1914							DECEMBER						
	Footnote	Local Datum			Sea-level Datum			Footnote	Local Datum			Sea-level Datum		
		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1		98.70	99.50	76.60	1060.30	1060.57	1036.97		98.80	99.70	76.60	1060.40	1060.77	1036.97
2			99.50	76.50		60.57	36.87			99.60	76.70		60.67	37.07
3		98.75	99.45	76.60	60.35	60.52	36.97		98.80	99.60	76.75	60.40	60.67	37.12
4			99.45	76.60		60.52	36.97			99.65	76.75		60.72	37.12
5		98.70	99.60	76.55	60.30	60.67	36.92		98.80	99.70	76.75	60.40	60.77	37.12
6			99.70	76.55		60.77	36.92			99.70	76.65		60.77	37.02
7		98.70	99.50	76.60	60.30	60.57	36.97		98.80	99.65	76.35	60.40	60.72	36.72
8		98.80	99.80	76.50	60.40	60.87	36.87			99.65	76.50		60.72	36.87
9			99.75	76.40		60.82	36.77		98.75	99.65	76.50	60.35	60.72	36.87
10		98.75	99.60	76.60	60.35	60.67	36.97			99.70	76.50		60.77	36.87
11			99.50	76.65		60.57	37.02		98.80	99.70	76.55	60.40	60.77	36.92
12		98.65	99.60	76.70	60.25	60.67	37.07			99.70	76.50		60.77	36.87
13			99.60	76.70		60.67	37.07	1	98.80	99.70	76.45	60.40	60.77	36.82
14			99.50	76.80		60.57	37.17			99.70	76.35		60.77	36.72
15		98.65	99.60	76.70	60.25	60.67	37.07		98.80	99.70	76.50	60.40	60.77	36.87
16			99.60	76.35		60.67	36.72			99.70	76.50		60.77	36.87
17		98.65	99.60	76.35	60.25	60.67	36.72		98.80	99.70	76.55	60.40	60.77	36.92
18		98.50	99.40	76.50	60.10	60.47	36.87			99.70	76.55		60.77	36.92
19			99.60	76.60		60.67	36.97		98.80	99.70	76.55	60.40	60.77	36.92
20		98.65	99.60	76.60	60.25	60.67	36.97			99.70	76.40		60.77	36.77
21			99.60	76.65		60.67	37.02	2	98.85	99.75	76.35	60.45	60.82	36.72
22		98.65	99.65	76.65	60.25	60.72	37.02			99.75	76.50		60.82	36.87
23		98.75	99.70	76.55	60.35	60.77	36.92		98.85	99.75	76.55	60.45	60.82	36.92
24			99.65	76.35		60.72	36.72			99.70	76.60		60.77	36.97
25		98.80	99.65	76.60	60.40	60.72	36.97		98.85	99.70	76.55	60.45	60.77	36.92
26			99.60	76.70		60.67	37.07			99.70	76.40		60.77	36.77
27		98.80	99.60	76.70	60.40	60.67	37.07		98.80	99.65	76.45	60.40	60.72	36.82
28			99.65	76.70		60.72	37.07			99.65	76.35		60.72	36.72
29		98.80	99.65	76.60	60.40	60.72	36.97		98.80	99.70	76.50	60.40	60.77	36.87
30			99.60	76.35		60.67	36.72			99.70	76.60		60.77	36.97
31									98.80	99.70	76.60	60.40	60.77	36.97

1. Mill A shut down last Sunday morning, Dec. 13. Been closed all week. 2. Mill A started Dec. 21, 1914. Mill C closed down from 19th to 31st Dec., 1914.

* For 1915 records see page 294.

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN AND KEEWATIN, ONTARIO

RECORDS OF THE DEPARTMENT OF PUBLIC WORKS, ONTARIO

LIST OF FOOTNOTES "d"

1898

Dec. 2 I may here explain that the way the water gauges have been put in by Mr. Kennedy the Engineer in charge of the construction, the normal level of the lake is called 100, and as you will observe by the report the water is very nearly the 100 level at present at Rat Portage with the stop logs all in position. (Misc.)

1899

May 17 The flumes are filling with drift wood and logs again (S) Capt. Thomson of the steamer Sport from Ash Rapids, day before yesterday, reported 5 ft. of water at the shallowest part of Ash Rapids. (R. B.) & (S.)

May 18 General satisfaction is expressed at the Condition of Ash Rapids by the Steamboat men, the largest boats on that route have gone through without any trouble this week. (R. B.)

May 24 A great deal of drift wood is coming down and jamming into the flumes. I expect I will be compelled to put on some men to dislodge it as it is keeping back the water a good deal. (S.)

June 20 Tail Water: Record given on Sheets is "85.80," and in Record Book "85." The decimal figures were presumably omitted from book because other writing occupied the space and thus interfered. Record from Sheets adopted. (Engrs.)

June 26 Water in the lake at a stand at present and about 10" lower than the high water of /97. It has not yet interfered with the mills and I learn from the Millwright in the R. P. L. Co Mill at Rat Portage that it would take a foot more to stop them. (S.)—The Mill here referred to was subsequently burned down and a new one built at a higher elevation. (Engrs.)

July 10 You will observe that Rainy River commenced to fall on the 20th June. The Lake has been steadily rising, to-day it has fallen slightly, caused I think by the wind, a few inches more of a raise will cause the saw mill at Rat Portage to close down. The water is not quite as high yet as it was in (97). The stop logs are all out. (S.)

July 17 The Reports from the Rainy River and the Big American, I send them as I get them by mail. Sometimes they skip a day or two and then reports are not continuous. The water has not interfered with the sawmills yet, but I see Rainy River has risen again and we expect a slight rise in consequence. (S.)

July 27 All the variation in the water this week has been caused by the wind. Rat Portage Lumber Co. let all the drift wood in their boom down the river this week. The greater part of it I managed to get through the flumes except some of the larger trees and logs that got sideways across the face of the piers which does not effect the free discharge of the water through the dam however. (R. B.) & (S.)

Sept. 28 On Sept. 27 and 28 the wind blew for 48 hrs. (Misc.)

Sept. 30 I commenced to put in the stop logs and remove the drift wood on the 25th inst. I have the drift wood all cleared out and passed through the flumes as well as some of the logs in, will leave three out of each flume at present which I will put in later, if I find it necessary to maintain the lake at 100 which is the medium level or the level from which the engineers figured both ways, and if kept at that level I understand it will suit all parties concerned. A great deal of drift wood had accumulated and jammed into the flumes, and I find some difficulty in getting men to work at it on accoun. of the risk to life and limb, but have been very fortunate and all has gone well. (S.)

Nov. 9 Steamboat men are well satisfied with height of water at Ash Rapids and an immense amount of freight is being rushed through (S.)

Dec. 6 Nearly all the boats are now tied up for the winter, will take out logs you ordered next week. (S.)

1900

Mar. 26 I see by comparing the present level of lake with level at same date last year that the lake is between 7" and 8" lower at present than it was on the 26th March last year. This I presume would indicate that logs should be put in earlier than last Spring more especially as there had been such a small fall of snow this winter, consequently the lake will not be likely to rise as high as last spring. I might mention that there is a great deal more ice at the dam this spring than there was last spring, the slots in the stone piers are all completely filled with ice and to attempt to put the logs in at present would mean a great deal more work than it would to put them in after the weather has got somewhat milder. It does not take the ice long to go once it gets a few days of sunshine. If you think it necessary to put in the balance of the logs at an early date, and would give me authority, I will wait for say two weeks at the outside limit for the ice to thaw and if it thawed sooner I could put them in sooner, but if on the other hand you think they should be put in at once I can put them in but it will take a good deal longer. I think myself it is going to be hard work to keep the lake up to 101 this summer on account of the light fall of snow this winter. (S.)

Apr. 4 I got through at one day I put in 72 logs 48 12" logs and 24 15" logs. The logs are all in now, The ice has carried away my lake level gauge, but I have a private one that is very nearly correct, but I would prefer to have a gauge placed by an Engineer in case of difficulties of any kind arising. Probably you could get some of the local engineers to replace the lake level gauge. (Misc.)

Apr. 14 Ferry commenced to run between Keewatin and Rat Portage the 14th inst. (S.) Ferry commenced to run 14th inst. (R. B.) Ferry boat from Keewatin. (M.)

June 8 Considerable rain has fallen this last week. I have been away from home the last two weeks but my son has taken the levels each day but as there was no material change in the levels he did not send the report until I returned. (S.)

July 1-10 Three days steady rain this week. Steamboats from the river report water rising rapidly logs which were hung up coming down. (S.)

Sept. 26 On the 26th took out two large and three small logs right across. (R. B.) On the authority of a telegram from the Department of Public Works received by Mr. Margach and by him presented to me I have commenced to remove some of the stop logs. I will remove two logs out of each sluice right across as I think that it will be sufficient to keep the water from flooding the sawmill, the proprietors of which I understand wired for the instructions to remove the logs. (S.)

Oct. 17 All the logs are out now except a row of three in the bottom. The water is not discharging out of the dam faster than it is coming in at the mouth of the Wpg. River as shown by the dam getting lower while the lake is still rising so that it would not discharge any faster out of the lake with the three bottom logs out and as the mud on the upper side of the dam is about level with the top of the third log they could not be replaced properly if removed. (S.)

1901

Mar. 15 Will put in logs as soon as the weather moderates, it has been fine for a few days, but it has turned very cold again and blowing a gale. I expect it will moderate as soon as those equinoxal gales are over. (S.)

May 22 I had word from Rainy Lake last week that the lake was rising and as that always means a considerable rise in the Lake of the Woods I took 40 logs out of the dam on Friday and Saturday last which accounts for the change of the levels in this report. I expect the level of the Lake of the Woods will be up to 101 again in a few days as soon as the water from Rainy Lake gets down. Now would be a good time to remove the boulders from Ash Rapids as there is no current there to speak of at present. (S.)

July 24 Now would be a good time to have the boulders removed from Ash Rapids as there is very little current in either direction, the water runs the way the wind happens to blow. The height of the water in the lake this season has given general satisfaction to all parties concerned, and if the boulders were removed now Ash Rapids would be navigable even if the water was somewhat lower than at present. (Misc.)

Aug. 10 I shall put in some of the logs as soon as I can get some men, all parties interested are satisfied to have some of the logs put in. Men are scarce and it may take a day or two to get over a crew to work the winches. The dam is full of driftwood and I shall require a couple of men extra to remove the jam before I can put the logs in. (S.)

Sept. 5 The following note refers to a bill for pike poles which McQuarrie says he was compelled to purchase. (Engrs.) To break the jamb at the dam, before I could put in the logs. (Misc.)

Oct. 17 The logs are all in now.
When I put the logs in last August I left one out all the way across as I anticipated wet weather the same as last fall. (Misc.)

1902

Apr. 26 In reference to their being driftwood under the logs, I may say there is one place where there is a small hole which I could not see when the water was high and when I put the logs in I did not detect its presence as the water was high and rushing over the logs.
I am satisfied that the water escaping between these logs did not affect the level of the lake. (Misc.)

May 12 A Government boom is badly needed to keep driftwood from going down into the dam, because there are long sticks and whole trees that will not pass through the flumes on account of their length, there are also old half sunken barges and discarded hulls of steamboats, that find their way into the dam when there is no boom to hold them back.
The Rat Portage Lumber Company have a boom across the mouth of the River, but it is only a common single boom, and it breaks loose several times during the season and lets the accumulations of months pass down into the dam.
I might add that to get the driftwood at present in the dam out, will require the services of a tug. It will have to be pulled away from the flumes before the logs are taken out, to prevent a jamb in the flumes. (Misc.)

1905

Feb. 18 The following is a copy of a letter which was attached to the Record sheet, and which had been sent to Lemay by the Department of Public Works, (Ontario). Lemay's reply was not found. (Engrs.) "Your report of the water levels at Keewatin Dam and Rat Portage for the first half of the month of February from the 1st to 15th received today. I observe that the water has been falling steadily at Rat Portage, since the 15th of August when it reached 100.90 until the 10th February when it had fallen to 98. Is this not a mistake in the reading. The reading of the tail water on the 10th of February is given as 78.10 and on the 11th as 77. This also looks like a mistake in the reading. Please look into this matter and let me know the correct reading since February 10th."

May 25 With regard to the levels of the waters of the Lake of the Woods Mr. Napoleon Lemay had new gauges made and put up recently. Enquire of him and he will no doubt show you where they are. There are three gauges, one for the level of the Lake of the Woods, one at the head of the dam, and one below the dam.
The height to which it has been customary to maintain the water is about 101.00 on the gauge at the wharf in Norman, which Mr. Lemay will be able to point out to you, or his son will show you. (Misc.)

July 8–14 Took out on the 8th of July to the 14th 62 logs. (S.)

July 21–31 Have taken out 130 logs up to date. Dock at Norman floating. The lake is higher than what I have got on the report. It has lowered five inches according to gauge put on a week ago but stays same on dock. (S.)

Aug. 7–12 On the 7th, 8th, 9th, and 12th, took out some driftwood and 36 stop logs water raised up 5 inches. (R. B.) & (S.)

Sept. — Water has dropped five inches. I haven't found McQuarrie's gauge at his house I put in 101 mark I haven't measured down to it and it now stands one foot over it. I think it's right 102. I will be able to tell when the water gets down lower. (R. B) & (S.)

Oct. 1–14 Heavy storm on the night of the 1st, raised the water eight inches and broke the upper boom and about three thousand logs got down the dam and a whole lot of driftwood with it. I have seen the parties which own the logs and they have made a boom below the dam to catch the timber so I expect to start Monday and break the jam. (R. B.) & (S.)

1906

May 1 The following is a copy of a letter dated Keewatin, May 1, 1906, attached to Record Sheet sent by Gauge Reader (Hansen) to Department of Public Works, Ontario. (Engrs.)

"I started in with six men on the 16th of April to clear out all the driftwood and timber out of the north branch. I had 36 logs out of the south branch up to that date, up to the 20th I had out 56, up to the present time 140. As you see by the report the water is high both in the back lake and the front lake. I am very glad that I am going to get the levels from Emo and Pinewood as I could not get any information how the water in the river was."

1907

June 26 It appears that the water in the Lake of the Woods rose suddenly from May 6 to June 15—about 14"—but from June 15 to June 25 it has not risen any. As this is a low stage of water you must take every precaution to keep the lake up to about 100 on the gauge during the season of Navigation. You must keep the logs as tight as possible and prevent leakage. (Misc.)

Aug. 3 The following is a copy of a letter dated Keewatin, Aug. 3, attached to sheet sent by Gauge Reader (Hansen) to Dept. of Public Works, Ontario. (Engrs.)

"I received your letter and I see I made an error in my report. It should have been 99.00. In your letter you were asking me if there was much water going through. I have been putting in stop logs gradually and cleaned out the gates. But there is still 2 ft. of water running over the gates at the south side of dam. I intended to put in those logs during this coming week. I am trying not to lower the tailwater too fast."

Oct. 14 The following is a copy of a letter dated Keewatin, Oct. 14, attached to sheet sent by Gauge Reader (Hansen) to Dept. of Public Works, Ontario. (Engrs.) "As you can see by the report the lake has risen very fast lately. I have taken out 68 logs. It is very near to the high water mark. I think it will be wise to lower the zero mark as it is too short a distance to regulate it on. I am trying to do my best to hold it down."

1909

Oct. 21 Your report of water levels for October 1–16 received this morning. I notice that on the 11th inst., there appears to have been a lowering of the water on the Lake of the Woods of $\frac{7}{8}$ of a foot or nearly $7\frac{1}{2}$". This seems impossible. Will you please send an explanation of this abnormal condition?

Your report shows the elevation of the height of water at Rat Portage as follows:

On the 9,—98.80; 10th, 98.60; 11,—98.00; 12,—98.30; and on the 13,—98.60. Are these figures correct? If so how do you account for the sudden fall? (Misc.)

TABLE 8

WATER LEVELS—LAKE OF THE WOODS—WARROAD, MINN.

RECORDS OF U. S. WAR DEPARTMENT

1899	May			June			July			August		
	Footnote	Gauge Height, 12 m.	Elevation, Sea-level Datum	Footnote	Gauge Height, 8 a. m.	Elevation, Sea-level Datum	Footnote	Gauge Height, 8 a. m.	Elevation, Sea-level Datum	Footnote	Gauge Height, 8 a. m.	Elevation, Sea-level Datum
1					7.20	1060.80		7.77	1061.37		8.49	1062.09
2					7.28	60.88					8.46	62.06
3					7.41	61.01		8.03	61.63		8.42	62.02
4					7.12	60.72		8.20	61.80		8.41	62.01
5					7.39	60.99		8.25	61.85		8.51	62.11
6					7.52	61.12		8.50	62.10		8.43	62.03
7					6.70	60.30		8.41	62.01		8.50	62.10
8					7.40	61.00		8.35	61.95		8.50	62.10
9					7.48	61.08		8.34	61.94		8.43	62.03
10					7.47	61.07		8.49	62.09		8.33	61.93
11					7.50	61.10		8.41	62.01		8.31	61.91
12					7.53	61.13		8.58	62.18		8.54	62.14
13					7.81	61.41		8.48	62.08		8.38	61.98
14					7.90	61.50		8.42	62.02		8.31	61.91
15					7.63	61.23		8.41	62.01		8.30	61.90
16					7.61	61.21		8.61	62.21		8.27	61.87
17								8.41	62.01		8.35	61.95
18		7.00	1060.60					8.32	61.92		8.32	61.92
19		7.03	60.63					8.71	62.31		8.34	61.94
20		7.08	60.68					8.50	62.10		8.40	62.00
21		7.12	60.72		7.90	61.50		8.55	62.15		8.41	62.01
22		7.13	60.73		7.50	61.10					8.40	62.00
23					7.70	61.30					8.20	61.80
24					7.85	61.45					8.20	61.80
25					7.88	61.48					7.90	61.50
26					7.91	61.51		8.55	62.15		8.00	61.60
27					7.90	61.50		8.43	62.03			
28					8.15	61.75		8.39	61.99		7.95	61.55
29					7.89	61.49		8.38	61.98		8.20	61.80
30		7.18	60.78		8.05	61.65		8.45	62.05		8.21	61.81
31								8.44	62.04		8.11	61.71

1899	September			October			November			December		
		8 a. m.										
1		8.01	1061.61		7.10	1060.70		7.20	1060.80		7.15	1060.75
2		7.35	60.95		7.00	60.60		7.31	60.91		7.30	60.90
3		7.81	61.41		7.00	60.60		7.13	60.73	1		
4		7.90	61.50		6.98	60.58		7.15	60.75	1		
5		8.00	61.60		7.00	60.60		7.20	60.80			
6		8.11	61.71		6.96	60.56		7.28	60.88			
7		7.60	61.20		6.80	60.40		7.10	60.70			
8		7.90	61.50		6.90	60.50		7.12	60.72			
9		7.75	61.35		6.95	60.55		7.15	60.75			
10		7.60	61.20		6.95	60.55		7.15	60.75			
11		7.48	61.08		6.80	60.40		7.15	60.75			
12		7.75	61.35		7.30	60.90		7.20	60.80			
13		7.70	61.30		6.65	60.25		7.20	60.80			
14		7.68	61.28		7.00	60.60		7.10	60.70			
15		7.49	61.09		6.90	60.50		7.30	60.90			
16		7.90	61.50		6.30	59.90		7.40	61.00			
17		7.75	61.35		6.98	60.58		7.22	60.82			
18		7.64	61.24		7.00	60.60		7.15	60.75			
19					7.00	60.60		7.20	60.80			
20		7.42	61.02		7.00	60.60		7.20	60.80		7.20	60.80
21		7.64	61.24		7.10	60.70		7.20	60.80		*7.20	60.80
22		7.50	61.10		7.05	60.65		7.30	60.90		*7.20	60.80
23		7.08	60.68		7.00	60.60					*7.10	60.70
24		7.50	61.10		7.05	60.65					*7.10	60.70
25		7.48	61.08		7.02	60.62						
26		7.08	60.68		7.05	60.65		7.20	60.80		7.10	60.70
27		7.10	60.70		7.00	60.60		7.15	60.75		7.10	60.70
28		7.15	60.75		7.10	60.70		7.30	60.90			
29		7.20	60.80		7.05	60.65		7.42	61.02			
30		7.20	60.80		7.05	60.65		7.20	60.80			
31					7.15	60.75						

1. River covered with ice. (S.)

* Reading at noon.

ABBREVIATIONS

(R. B.) Indicates that the note appears in the gauge reader's Record Book.

(S.) Indicates that the note appears on the Sheets sent monthly to the United States Engineer Office, at St. Paul, Minnesota.

TABLE 8—Continued

WATER LEVELS—LAKE OF THE WOODS—WARROAD, MINN.

RECORDS OF U. S. WAR DEPARTMENT

Date	JANUARY, 1900									MAY, 1903			JUNE, 1903		
	Footnote	Gauge Height	Elevation, Sea-level Datum	Footnote	Gauge Height	Elevation, Sea-level Datum	Footnote	Gauge Height	Elevation, Sea-level Datum	Footnote	Gauge Height	Elevation, Sea-level Datum	Footnote	Gauge Height	Elevation, Sea-level Datum
1														7.86	1061.46
2		6.95	1060.55											7.83	61.43
3		7.00	60.60											7.83	61.43
4														7.77	61.37
5														7.71	61.31
6														7.74	61.34
7														7.56	61.16
8														7.76	61.36
9														7.93	61.53
10														7.86	61.46
11		6.87	60.47											7.52	61.12
12														7.35	60.95
13														7.65	61.25
14														7.70	61.30
15											7.46	1061.06		7.84	61.44
16											7.61	61.21		7.60	61.20
17											7.46	61.06		7.55	61.15
18											7.66	61.26		7.82	61.42
19											7.59	61.19		7.58	61.18
20											7.59	61.19		7.66	61.26
21											7.69	61.29		7.56	61.16
22											8.06	61.66		7.56	61.16
23											7.96	61.56		7.51	61.11
24											7.51	61.11		7.54	61.14
25											7.76	61.36		7.48	61.08
26											7.73	61.33		7.38	60.98
27											7.81	61.41		7.42	61.02
28											7.86	61.46		7.36	60.96
29											7.86	61.46		7.41	61.01
30											7.73	61.33		7.64	61.24
31											7.83	61.43			

1903	JULY			AUGUST			SEPTEMBER					
1		7.46	1061.06		6.96	1060.56		6.46	1060.06			
2		7.57	61.17		6.96	60.56		6.56	60.16			
3		7.33	60.93		6.86	60.46		6.54	60.14			
4		7.34	60.94		6.81	60.41		6.35	59.95			
5		7.04	60.64		6.52	60.12		6.35	59.95			
6		7.35	60.95		6.71	60.31		6.54	60.14			
7		7.26	60.86		6.62	60.22		6.65	60.25			
8		6.81	60.41		6.66	60.26		6.20	59.80			
9		7.34	60.94		6.71	60.31		6.19	59.79			
10		7.20	60.80		7.11	60.71		6.26	59.86			
11		7.26	60.86		6.76	60.36		6.66	60.26			
12		7.18	60.78		6.70	60.30		*7.66	61.26			
13		7.30	60.90		6.81	60.41		6.11	59.71			
14		7.26	60.86		6.73	60.33		6.60	60.20			
15		7.16	60.76		6.64	60.24		6.66	60.26			
16		7.01	60.61		6.76	60.36		6.66	60.26			
17		7.14	60.74		6.86	60.46		6.56	60.16			
18		7.06	60.66		6.71	60.31		6.26	59.86			
19		7.22	60.82		6.81	60.41		6.34	59.94			
20		7.06	60.66		6.63	60.23		6.36	59.96			
21		7.06	60.66		6.66	60.26		6.76	60.36			
22		7.04	60.64		6.76	60.36		6.21	59.81			
23		6.92	60.52		6.72	60.32		6.51	60.11			
24		6.92	60.52		6.96	60.56		6.26	59.86			
25		7.26	60.86		6.70	60.30		6.42	60.02			
26		7.13	60.73		6.72	60.32		6.34	59.94			
27		7.12	60.72		6.91	60.51		6.42	60.02			
28		6.96	60.56		7.15	60.75		6.36	59.96			
29		7.01	60.61		6.69	60.29		6.11	59.71			
30		6.98	60.58		6.63	60.23		6.56	60.16			
31		6.95	60.55		6.51	60.11						

*O. K. by R. Davenport.

TABLE 8—Continued

WATER LEVELS—LAKE OF THE WOODS—WARROAD, MINN.

RECORDS OF U. S. WAR DEPARTMENT

1904	March					April					May				
	Footnote	Gauge Height			Elevation, Sea-level Datum	Footnote	Gauge Height			Elevation, Sea-level Datum	Footnote	Gauge Height			Elevation, Sea-level Datum
		8 a. m.	5 p. m.	Mean			8 a. m.	5 p. m.	Mean			8 a. m.	5 p. m.	Mean	
1												5.35	5.35	5.35	1058.95
2												5.35	5.40	5.37	58.97
3												5.40	5.40	5.40	59.00
4												5.45	5.50	5.47	59.07
5												5.50	5.47	5.49	59.09
6												5.60	5.60	5.60	59.20
7												5.52	5.60	5.56	59.16
8												5.67	5.70	5.69	59.29
9												5.72	5.70	5.76	59.36
10												5.70	5.75	5.73	59.33
11				5.69	1058.69						1	6.00	6.30	6.15	59.75
12											2	6.30	6.40	6.35	59.95
13							5.70	5.50	5.60	1059.20		6.10	6.00	6.05	59.65
14							5.50	5.50	5.50	59.10		6.00	6.00	6.00	59.60
15							5.50	5.40	5.45	59.05		6.10	6.00	6.05	59.65
16							5.40	5.40	5.40	59.00		6.10	6.10	6.10	59.70
17							5.30	5.30	5.30	58.90		6.05	6.05	6.05	59.65
18							5.10	5.10	5.10	58.70		6.10	6.10	6.10	59.70
19							5.00	5.00	5.00	58.60		6.10	6.10	6.10	59.70
20							5.00	5.00	5.00	58.60		6.10	6.10	6.10	59.70
21							5.00	5.00	5.00	58.60		6.10	6.10	6.10	59.70
22							5.00	5.00	5.00	58.60		6.10	6.10	6.10	59.70
23							5.00	5.00	5.00	58.60		6.15	6.15	6.15	59.75
24							5.00	5.00	5.00	58.60		6.40	6.20	6.30	59.90
25							5.10	5.10	5.10	58.70		6.30	6.30	6.30	59.90
26							5.10	5.10	5.10	58.70		6.20	6.10	6.15	59.75
27							5.15	5.15	5.15	58.75		6.10	6.10	6.10	59.70
28							5.20	5.20	5.20	58.80		6.10	6.00	6.05	59.65
29							5.25	5.25	5.25	58.85		6.20	6.40	6.30	59.90
30							5.25	5.30	5.27	58.87		6.20	6.20	6.20	59.80
31												6.20	6.30	6.25	59.85

1904	June					July					August				
1		6.30	6.40	6.35	1059.95		6.70	6.60	6.65	1060.25		7.00	7.00	7.00	1060.60
2	3	6.40	6.40	6.40	60.00		6.60	6.60	6.60	60.20		7.00	6.80	6.90	60.50
3	3	6.40	6.80	6.60	60.20		6.70	6.70	6.70	60.30		6.85	7.00	6.93	60.53
4	3	7.00	6.80	6.90	60.50		6.80	6.80	6.80	60.40		7.00	6.90	6.95	60.55
5	3	6.70	6.50	6.60	60.20		7.00	7.00	7.00	60.60		6.80	6.90	6.85	60.45
6	3	6.80	6.70	6.75	60.35		7.00	7.00	7.00	60.60		7.00	7.00	7.00	60.60
7		6.40	6.40	6.40	60.00		7.00	7.00	7.00	60.60		7.00	6.90	6.95	60.55
8		6.40	6.40	6.40	60.00		7.00	7.00	7.00	60.60		6.70	6.90	6.80	60.40
9		6.45	6.45	6.45	60.05		6.80	6.80	6.80	60.40		7.00	7.10	7.05	60.65
10		6.40	6.30	6.35	59.95		7.00	7.00	7.00	60.60		7.00	6.90	6.95	60.55
11		6.30	6.20	6.25	59.85		6.70	6.80	6.75	60.35		6.80	6.80	6.80	60.40
12	4	6.10	6.10	6.10	59.70		6.80	6.80	6.80	60.40		6.90	6.90	6.90	60.50
13		6.20	6.30	6.25	59.85		7.00	7.10	7.05	60.65		6.80	6.80	6.80	60.40
14		6.30	6.30	6.30	59.90		7.00	6.90	6.95	60.55		6.90	6.90	6.90	60.50
15		6.40	6.50	6.45	60.05		6.90	7.20	7.05	60.65		7.00	7.00	7.00	60.60
16		6.40	6.35	6.38	59.98		7.00	7.10	7.05	60.65		6.80	6.60	6.70	60.30
17		6.50	6.50	6.50	60.10		6.90	6.90	6.90	60.50		6.90	6.80	6.85	60.45
18		6.60	6.60	6.60	60.20		6.60	6.90	6.75	60.35		6.80	6.80	6.80	60.40
19		6.80	6.80	6.80	60.40		6.90	6.95	6.93	60.53		6.90	6.80	6.85	60.45
20		6.80	6.80	6.80	60.40		6.90	7.00	6.95	60.55		6.80	6.90	6.85	60.45
21		6.70	6.70	6.70	60.30		6.90	6.90	6.90	60.50	5	6.70	6.50	6.60	60.20
22		6.50	6.50	6.50	60.10		7.00	7.00	7.00	60.60	5	6.70	6.40	6.55	60.15
23		6.60	6.60	6.60	60.20		7.10	7.00	7.05	60.65	5	6.40	6.40	6.40	60.00
24		6.70	6.70	6.70	60.30		7.00	6.80	6.90	60.50		7.10	6.80	6.95	60.55
25		6.70	6.70	6.70	60.30		7.10	6.90	7.00	60.60		6.80	6.70	6.75	60.35
26		6.60	6.60	6.60	60.20		6.90	6.90	6.90	60.50		6.50	6.70	6.60	60.20
27		6.60	6.60	6.60	60.20		6.90	7.00	6.95	60.55		6.70	6.85	6.78	60.38
28		6.60	6.60	6.60	60.20		7.00	7.00	7.00	60.60		6.80	6.80	6.80	60.40
29		6.50	6.50	6.50	60.10		7.10	7.00	7.05	60.65		6.70	6.80	6.75	60.35
30		7.00	6.90	6.95	60.55		6.90	6.80	6.85	60.45		6.80	6.80	6.80	60.40
31							6.90	7.00	6.80	60.40		6.70	6.70	6.70	60.30

1. NE. Strong—Stormy Strong NE. Gale (R. B.)
2. NE. strong—Stormy strong NE. gale (R. B.)
3. E. strong (R. B.)
4. SW. strong (R. B.)
5. W. strong (R. B.)

TABLE 8—Continued

WATER LEVELS—LAKE OF THE WOODS—WARROAD, MINN.

RECORDS OF U. S. WAR DEPARTMENT

Date	September, 1904					October, 1904					January, 1905				
	Footnote	Gauge Height			Elevation, Sea-level Datum	Footnote	Gauge Height			Elevation, Sea-level Datum	Footnote	Gauge Height			Elevation, Sea-level Datum
		8 a.m.	5 p.m.	Mean			8 a.m.	5 p.m.	Mean			8 a.m.	6 p.m.	Mean	
1	...	6.80	6.80	6.80	1060.40	...	6.30	6.30	6.30	1059.90	...				
2	...	6.70	6.70	6.70	60.30	...	6.20	6.20	6.20	59.80	...				
3	...	6.60	6.50	6.55	60.15	...	6.25	6.30	6.28	59.88	...				
4	...	6.60	6.60	6.60	60.20	...	6.25	6.20	6.23	59.83	...				
5	...	6.60	6.60	6.60	60.20	...	6.20	6.20	6.20	59.80	...				
6	...	6.60	6.60	6.60	60.20	...	6.10	6.00	6.05	59.65	...				
7	...	6.60	6.60	6.60	60.20	..	6.00	6.10	6.05	59.65	...				
8	...	6.50	6.50	6.50	60.10	.	6.10	6.20	6.15	59.75	...				
9	...	6.50	6.50	6.50	60.10	...	6.20	6.20	6.20	59.80	...				
10	...	6.50	6.50	6.50	60.10	...	6.10	6.10	6.10	59.70	...				
11	...	6.50	6.50	6.50	60.10	...	6.15	6.15	6.15	59.75	...			5.00	1058.60
12	...	6.40	6.40	6.40	60.00	...	6.10	6.00	6.05	59.65	...				
13	...	6.20	6.20	6.20	59.80	...	6.00	6.00	6.00	59.60	...				
14	...	6.50	6.40	6.45	60.05	...	6.00	6.00	6.00	59.60	...				
15	...	6.20	6.10	6.15	59.75	.	6.00	6.00	6.00	59.60	..				
16	...	6.30	6.30	6.30	59.90	...	6.00	6.00	6.00	59.60	...				
17	...	6.50	6.50	6.50	60.10	...	6.00	5.90	5.95	59.55	...				
18	...	6.40	6.40	6.40	60.00	...	5.90	5.90	5.90	59.50	...				
19	...	6.20	6.70	6.45	60.05	...	6.00	6.00	6.00	59.60	...				
20	...	6.50	6.40	6.45	60.05	...	6.00	5.90	5.95	59.55	...				
21	...	6.30	6.30	6.30	59.90	...	5.70	5.80	5.75	59.35	...				
22	...	6.20	6.20	6.20	59.80	...	5.80	5.80	5.80	59.40	...				
23	...	6.20	6.30	6.25	59.85	...	5.80	6.00	5.90	59.50	...				
24	...	6.30	6.20	6.25	59.85	...	5.80	6.00	5.90	59.50	...				
25	...	6.10	6.10	6.10	59.70	...	5.80	6.00	5.90	59.50	...				
26	...	6.40	6.30	6.35	59.95	...	5.80	5.80	5.80	59.40	...				
27	...	6.30	6.30	6.30	59.90	1	5.10	5.70	5.40	59.00	...				
28	...	6.30	6.30	6.30	59.90	...	5.80	5.80	5.80	59.40	...				
29	...	6.20	6.20	6.20	59.80	...	6.00	5.80	5.90	59.50	...				
30	...	6.20	6.10	6.15	59.75	...	5.70	5.70	5.70	59.30	...				
31	...					...	5.80	5.80	5.80	59.40	...				

1905	April					May					June				
		7 a.m.	6 p.m.				7 a.m.	6 p.m.							
1	...					...	4.75	4.70	4.73	1058.33	...	6.10	6.10	6.10	1059.70
2	...					...	4.70	4.70	4.70	58.30	...	6.00	6.00	6.00	59.60
3	...					2	4.90	5.20	5.05	58.65	...	5.90	5.90	5.90	59.50
4	...					3	6.10	4.80	5.45	59.05	...	5.90	6.20	6.05	59.65
5	...					...	4.75	4.90	4.83	58.43	6	6.50	6.80	6.65	60.25
6	...					...	4.95	4.95	4.95	58.55	6	6.85	6.40	6.63	60.23
7	...					...	5.00	5.50	5.25	58.85	...	6.20	6.20	6.20	59.80
8	...					...	5.10	5.10	5.10	58.70	...	6.20	6.00	6.10	59.70
9	...					...	5.20	5.60	5.40	59.00	...	6.00	6.60	6.30	59.90
10	...					4	5.80	6.00	5.90	59.50	...	6.50	6.30	6.40	60.09
11	...					...	5.20	5.60	5.40	59.00	...	6.30	6.30	6.30	59.90
12	...					...	5.10	5.50	5.30	58.90	...	6.30	6.30	6.30	59.90
13	...					...	5.50	5.40	5.45	59.05	...	6.30	6.30	6.30	59.90
14	...					...	5.40	5.60	5.50	59.10	7	5.80	6.00	5.90	59.50
15	...					...	5.60	5.90	5.75	59.35	...	6.40	6.60	6.50	60.10
16	...					...	5.75	5.80	5.78	59.38	8	6.80	6.80	6.80	60.40
17	...					...	5.80	5.70	5.75	59.35	...	6.40	6.40	6.40	60.00
18	...					...	5.75	5.75	5.75	59.35	...	6.40	6.40	6.40	60.00
19	...					...	5.75	5.80	5.77	59.37	...	6.40	6.50	6.45	60.05
20	...					...	5.80	5.90	5.85	59.45	...	6.50	6.60	6.55	60.15
21	...					...	5.90	5.90	5.90	59.50	...	6.90	6.90	6.90	60.50
22	...					...	5.90	5.90	5.90	59.50	...	6.70	6.80	6.75	60.35
23	...					...	5.80	5.80	5.80	59.40	...	6.80	6.90	6.85	60.45
24	...	4.60	4.60	4.60	1058.20	5	5.40	5.20	5.30	58.90	...	6.70	6.80	6.75	60.35
25	...	4.60	4.60	4.60	58.20	...	5.90	5.90	5.90	59.50	...	7.00	7.00	7.00	60.60
26	...	4.60	4.60	4.60	58.20	...	6.00	5.90	5.95	59.55	...	7.00	7.00	7.00	60.60
27	...	4.60	4.60	4.60	58.20	...	5.90	6.00	5.95	59.55	...	6.90	6.90	6.90	60.50
28	...	4.60	4.60	4.60	58.20	...	5.90	6.00	5.95	59.55	...	6.90	6.90	6.90	60.50
29	...	4.90	4.70	4.80	58.40	...	6.00	5.95	5.98	59.58	...	6.90	6.80	6.85	60.45
30	...	4.65	4.70	4.68	58.28	...	6.00	6.00	6.00	59.60	...	6.80	6.80	6.80	60.40
31	...					...	5.90	5.70	5.80	59.40	...				

1. W. strong (R. B.)
2. E. strong, rain and NE. gale at night (R. B.)
3. SE. strong (R. B.)
4. SE. strong, SE. gale all day (R. B.)
5. SW. strong, rain and NE. gale half day (R. B.)
6. E. G. (presumably gale, Engrs.) (R. B.)
7. SW. strong (R. B.)
8. E. strong, east gale all day with little rain (R. B.)

TABLE 8—Continued

WATER LEVELS—LAKE OF THE WOODS—WARROAD, MINN.

RECORDS OF U. S. WAR DEPARTMENT

1905	July					August					September				
	Footnote	Gauge Height			Elevation, Sea-level Datum	Footnote	Gauge Height			Elevation, Sea-level Datum	Footnote	Gauge Height			Elevation, Sea-level Datum
		8 a.m.	7 p.m.	Mean			8 a.m.	7 p.m.	Mean			8 a.m.	7 p.m.	Mean	
1	...	7.00	7.10	7.05	1060.65	...	8.30	8.30	8.30	1061.90	...	8.60	8.60	8.60	1062.20
2	...	7.10	7.10	7.10	60.70	...	8.30	8.30	8.30	61.90	3	9.00	8.90	8.95	62.55
3	...	7.30	7.40	7.35	60.95	...	8.30	8.30	8.30	61.90	...	8.70	8.60	8.65	62.25
4	1	8.30	8.30	8.30	61.90	...	8.30	8.60	8.45	62.05	...	8.50	8.40	8.45	62.05
5	...	7.60	7.80	7.70	61.30	...	8.40	8.40	8.40	62.00	...	8.40	8.40	8.40	62.00
6	...	7.50	7.50	7.50	61.10	...	8.40	8.40	8.40	62.00	...	8.40	8.40	8.40	62.00
7	...	7.70	7.70	7.70	61.30	...	8.50	8.40	8.45	62.05	...	8.20	8.30	8.25	61.85
8	...	7.60	7.60	7.60	61.20	...	8.40	8.30	8.35	61.95	...	8.50	8.30	8.40	62.00
9	...	7.70	7.70	7.70	61.30	...	8.40	8.40	8.40	62.00	...	8.40	8.40	8.40	62.00
10	...	7.60	7.30	7.45	61.05	...	8.90	8.40	8.65	62.25	...	8.40	8.40	8.40	62.00
11	...	7.60	7.60	7.60	61.20	...	8.40	8.40	8.40	62.00	...	8.40	8.20	8.30	61.90
12	...	7.60	7.60	7.60	61.20	...	8.40	8.50	8.45	62.05	...	8.50	8.30	8.40	62.00
13	...	7.80	7.90	7.85	61.45	...	8.60	8.60	8.60	62.20	...	8.20	8.60	8.40	62.00
14	...	7.80	7.90	7.85	61.45	...	8.50	8.60	8.55	62.15	...	8.40	8.40	8.40	62.00
15	...	8.10	7.90	8.00	61.60	...	8.50	8.50	8.50	62.10	...	8.10	8.30	8.20	61.80
16	...	7.80	7.90	7.85	61.45	...	8.50	8.40	8.45	62.05	...	8.30	8.30	8.30	61.90
17	...	7.90	8.00	7.95	61.55	...	8.50	8.40	8.45	62.05	...	8.30	8.30	8.30	61.90
18	...	7.70	7.70	7.70	61.30	...	8.40	8.40	8.40	62.00	...	8.40	8.30	8.35	61.95
19	...	8.00	8.10	8.05	61.65	...	8.50	8.40	8.45	62.05	...	8.00	8.20	8.10	61.70
20	...	8.00	8.00	8.00	61.60	...	8.30	8.30	8.30	61.90	4	8.00	8.00	8.00	61.60
21	2	8.10	8.20	8.15	61.75	...	8.30	8.40	8.35	61.95	...	7.80	8.20	8.00	61.60
22	2	8.10	8.30	8.20	61.80	...	8.40	8.40	8.40	62.00	...	8.10	8.30	8.20	61.80
23	2	8.40	8.60	8.50	62.10	...	8.50	8.50	8.50	62.10	...	8.20	8.00	8.10	61.70
24	...	8.30	8.20	8.25	61.85	...	8.50	8.50	8.50	62.10	...	8.40	8.40	8.40	62.00
25	...	8.20	8.20	8.20	61.80	...	8.50	8.40	8.45	62.05	...	8.20	8.30	8.25	61.85
26	...	8.20	8.10	8.15	61.75	...	8.50	8.60	8.55	62.15	...	8.10	8.20	8.15	61.75
27	...	8.20	8.30	8.25	61.85	...	8.40	8.50	8.45	62.05	...	8.20	8.20	8.20	61.80
28	...	8.30	8.30	8.30	61.90	...	8.50	8.60	8.55	62.15	...	8.10	8.20	8.15	61.75
29	...	8.20	8.20	8.20	61.80	...	8.40	8.30	8.35	61.95	...	8.00	8.10	8.05	61.65
30	...	8.40	8.40	8.40	62.00	...	8.40	8.70	8.55	62.15	...	8.10	8.20	8.15	61.75
31	...	8.30	8.30	8.30	61.90	...	8.50	8.60	8.55	62.15	...	.....	.....	.....	.....

1905	October					November					December				
1	5	6.40	7.40	6.90	1060.50	...	.....	.....	.....	.....	...	.....	.....	.....	.....
2	..	7.60	7.90	7.75	61.35	...	.....	.....	.....	.....	...	.....	.....	.....	.....
3	...	8.00	8.00	8.00	61.60	...	.....	.....	.....	.....	...	.....	.....	.....	.....
4	...	7.90	8.10	8.00	61.60	...	.....	.....	.....	.....	...	.....	.....	.....	.....
5	...	8.10	8.20	8.15	61.75	...	.....	.....	.....	.....	...	.....	.....	.....	.....
6	...	7.90	7.90	7.90	61.50	...	.....	.....	.....	.....	...	.....	.....	.....	.....
7	...	7.70	8.10	7.90	61.50	...	.....	.....	.....	.....	...	.....	.....	.....	.....
8	...	8.50	8.00	8.25	61.85	...	.....	.....	.....	.....	...	.....	.....	.....	.....
9	..	7.90	7.70	7.80	61.40	...	.....	.....	.....	.....	...	.....	.....	.....	.....
10	..	7.70	7.70	7.70	61.30	...	.....	.....	.....	.....	...	.....	.....	.....	.....
11	...	7.90	7.90	7.90	61.50	...	.....	.....	.....	.....	...	.....	.....	.....	.....
12	...	7.90	7.90	7.90	61.50	...	.....	.....	.....	.....	...	.....	.....	.....	.....
13	...	8.00	8.00	8.00	61.60	...	.....	.....	.....	.....	...	.....	.....	.....	.....
14	..	8.10	8.00	8.05	61.65	...	.....	.....	.....	.....	...	.....	.....	.....	.....
15	...	8.10	7.70	7.90	61.50	...	.....	.....	.....	.....	...	.....	.....	.....	.....
16	...	7.80	7.80	7.80	61.40	...	.....	.....	.....	.....	...	.....	.....	8.11	1061.71
17	...	8.20	8.00	8.10	61.70	...	.....	.....	.....	.....	...	.....	.....	.....	.....
18	...	7.90	8.00	7.95	61.55	...	.....	.....	.....	.....	...	.....	.....	.....	.....
19	6	8.10	8.20	8.15	61.75	...	.....	.....	.....	.....	...	.....	.....	.....	.....
20	...	7.90	7.80	7.85	61.45	...	.....	.....	.....	.....	...	.....	.....	.....	.....
21	..	7.80	7.80	7.80	61.40	...	.....	.....	.....	.....	...	.....	.....	.....	.....
22	...	7.70	7.70	7.70	61.30	...	.....	.....	.....	.....	...	.....	.....	.....	.....
23	...	7.90	8.00	7.95	61.55	...	.....	.....	.....	.....	...	.....	.....	.....	.....
24	...	7.90	7.70	7.80	61.40	...	.....	.....	.....	.....	...	.....	.....	.....	.....
25	...	7.80	7.70	7.75	61.35	...	.....	.....	.....	.....	...	.....	.....	.....	.....
26	...	7.60	7.70	7.65	61.25	...	.....	.....	.....	.....	...	.....	.....	.....	.....
27	..	7.80	7.80	7.80	61.40	...	.....	.....	.....	.....	...	.....	.....	.....	.....
28	7	7.80	7.60	7.70	61.30	...	.....	.....	.....	.....	...	.....	.....	.....	.....
29	..	7.70	7.70	7.70	61.30	...	.....	.....	.....	.....	...	.....	.....	.....	.....
30	...	7.70	7.80	7.75	61.35	...	.....	.....	8.00	1061.60	...	.....	.....	8.00	61.60
31	...	7.60	7.60	7.60	61.20	...	.....	.....	.....	.....	...	.....	.....	.....	.....

1. NE. strong (R. B.)
2. N. strong (R. B.)
3. NE. strong (R. B.)
4. SW. strong (R. B.)
5. S. strong (R. B.)
6. NE. strong (R. B.)
7. River frozen over (S.)

TABLE 8—Continued

WATER LEVELS—LAKE OF THE WOODS—WARROAD, MINN.

RECORDS OF U. S. WAR DEPARTMENT

1906	JANUARY			FEBRUARY			MARCH			APRIL		
	Footnote	Gauge Height	Elevation, Sea-level Datum	Footnote	Gauge Height	Elevation, Sea-level Datum	Footnote	Gauge Height	Elevation, Sea-level Datum	Footnote	Gauge Height	Elevation, Sea-level Datum
1	....	8.00	1061.60	....	7.80	1061.40	....	7.70	1061.30	....	7.30	1060.90
2												
3												
4												
5												
6												
7											7.20	60.80
8												
9												
10												
11												
12												
13												
14											7.40	61.00
15												
16												
17												
18												
19												
20												
21												
22											7.75	61.35
23												
24												
25												
26												
27												
28												
29											7.80	61.40
30												
31												

1906	MAY					JUNE					JULY			
	Footnote	Gauge Height			Elevation, Sea-level Datum	Footnote	Gauge Height			Elevation, Sea-level Datum	Footnote	Gauge Height			Elevation, Sea-level Datum
		8 a.m.	5 p.m.	Mean			8 a.m.	5 p.m.	Mean			8 a.m.	5 p.m.	Mean	
1	....	7.80	.....	7.80	1061.40	....	7.60	7.50	7.55	1061.15	....	7.90	7.90	7.90	1061.50
2	....	7.80	7.80	7.80	61.40	....	7.50	7.40	7.45	61.05	....	8.00	7.90	7.95	61.55
3	....	7.70	7.70	7.70	61.30	....	7.50	7.60	7.55	61.15	....	7.90	7.90	7.90	61.50
4	....	7.70	7.80	7.75	61.35	....	7.60	7.70	7.65	61.25	....	8.00	7.90	7.95	61.55
5	....	7.70	7.70	7.70	61.30	....	7.60	7.60	7.60	61.20	....	7.90	7.90	7.90	61.50
6	....	7.80	7.80	7.80	61.40	....	7.70	7.90	7.80	61.40	....	7.90	7.80	7.85	61.45
7	....	7.90	7.90	7.90	61.50	....	7.60	7.50	7.55	61.15	....	7.80	7.80	7.80	61.40
8	....	7.80	7.80	7.80	61.40	....	7.60	7.90	7.75	61.35	....	7.70	7.90	7.80	61.40
9	....	7.80	7.90	7.85	61.45	....	7.60	7.70	7.65	61.25	....	7.90	7.90	7.90	61.50
10	....	7.80	7.90	7.85	61.45	....	7.60	7.70	7.65	61.25	....	7.90	7.80	7.85	61.45
11	....	7.70	7.70	7.70	61.30	....	7.70	7.70	7.70	61.30	....	7.70	7.70	7.70	61.30
12	....	7.70	7.90	7.80	61.40	....	7.60	7.60	7.60	61.20	....	7.70	7.70	7.70	61.30
13	....	7.90	8.00	7.95	61.55	....	7.50	7.50	7.50	61.10	....	7.80	7.70	7.75	61.35
14	....	8.00	7.90	7.95	61.55	....	7.50	7.50	7.50	61.10	....	7.70	7.70	7.70	61.30
15	....	7.80	7.70	7.75	61.35	....	7.60	7.70	7.65	61.25	....	7.60	7.60	7.60	61.20
16	....	7.70	7.70	7.70	61.30	....	7.60	7.70	7.65	61.25	....	7.70	7.80	7.75	61.35
17	1	7.80	6.50	7.15	60.75	....	7.50	7.70	7.60	61.20	....	7.70	7.70	7.70	61.30
18	2	6.60	7.70	7.15	60.75	....	7.70	7.60	7.65	61.25	....	7.60	7.60	7.60	61.20
19	....	7.80	7.80	7.80	61.40	....	7.70	7.70	7.70	61.30	....	7.60	7.70	7.65	61.25
20	....	7.80	7.80	7.80	61.40	....	7.60	7.50	7.55	61.15	....	7.70	7.70	7.70	61.30
21	....	7.80	7.80	7.80	61.40	....	7.70	7.70	7.70	61.30	4	7.70	8.20	7.95	61.55
22	....	7.80	7.80	7.80	61.40	....	7.70	7.70	7.70	61.30	....	7.70	7.70	7.70	61.30
23	....	7.80	7.90	7.85	61.45	....	7.70	7.70	7.70	61.30	....	7.60	7.50	7.55	61.15
24	....	7.80	7.80	7.80	61.40	....	7.70	7.70	7.70	61.30	....	7.50	7.70	7.60	61.20
25	3	8.10	8.20	8.15	61.75	....	7.80	8.00	7.90	61.50	....	7.60	7.70	7.65	61.25
26	3	8.20	7.80	8.00	61.60	....	7.80	7.80	7.80	61.40	....	7.70	7.70	7.70	61.30
27	....	7.70	7.60	7.65	61.25	....	7.90	7.90	7.90	61.50	....	7.60	7.50	7.55	61.15
28	....	7.60	7.60	7.60	61.20	....	7.90	8.00	7.95	61.55	....	7.60	7.80	7.70	61.30
29	....	7.50	7.70	7.60	61.20	....	7.90	7.60	7.75	61.35	....	7.60	7.70	7.65	61.25
30	....	7.70	7.80	7.75	61.35	....	7.90	7.40	7.65	61.25	....	7.70	7.70	7.70	61.30
31	....	7.70	7.70	7.70	61.30	....	.....	.....	.....	.....	....	7.70	7.60	7.65	61.25

1. W. strong (R. B.) 2. NW. strong (R. B.) 3. NE. strong (R. B.) 4. E. strong (R. B.)

TABLE 8—Continued

WATER LEVELS—LAKE OF THE WOODS—WARROAD, MINN.

RECORDS OF U. S. WAR DEPARTMENT

1906	August					September					October				
	Footnote	Gauge Height			Elevation, Sea-level Datum	Footnote	Gauge Height			Elevation, Sea-level Datum	Footnote	Gauge Height			Elevation, Sea-level Datum.
		8 a.m.	5 p.m.	Mean			8 a.m.	5 p.m.	Mean			8 a.m.	5 p.m.	Mean	
1	...	7.60	7.60	7.60	1061.20	...	6.80	7.40	7.10	1060.70	...	6.40	6.40	6.40	1060.00
2	...	7.60	7.70	7.65	61.25	...	7.10	7.10	7.10	60.70	...	6.60	6.50	6.55	60.15
3	...	7.70	7.60	7.65	61.25	...	7.10	7.00	7.05	60.65	...	6.60	6.40	6.50	60.10
4	...	7.60	7.60	7.60	61.20	...	6.90	7.00	6.95	60.55	...	6.30	6.20	6.25	59.85
5	...	7.60	7.60	7.60	61.20	...	7.00	7.00	7.00	60.60	...	6.30	6.40	6.35	59.95
6	...	7.60	7.60	7.60	61.20	...	7.00	7.00	7.00	60.60	...	6.40	6.60	6.50	60.10
7	...	7.60	7.60	7.60	61.20	...	7.00	7.00	7.00	60.60	...	6.50	6.50	6.50	60.10
8	...	7.60	7.60	7.60	61.20	...	7.00	7.00	7.00	60.60	4	5.80	6.60	6.20	59.80
9	...	7.50	7.50	7.50	61.10	...	7.10	7.00	7.05	60.65	...	6.50	6.50	6.50	60.10
10	...	7.40	7.50	7.45	61.05	...	7.00	7.00	7.00	60.60	...	6.50	6.40	6.45	60.05
11	...	7.60	7.60	7.60	61.20	...	7.00	7.00	7.00	60.60	...	6.20	6.20	6.20	59.89
12	...	7.50	7.40	7.45	61.05	...	7.00	7.00	7.00	60.60	...	6.30	6.30	6.30	59.90
13	...	7.40	7.40	7.40	61.00	...	6.90	7.00	6.95	60.55	...	6.30	6.30	6.30	59.90
14	...	7.40	7.40	7.40	61.00	...	6.80	7.00	6.90	60.50	...	6.20	6.30	6.25	59.85
15	...	7.40	7.40	7.40	61.00	...	6.90	6.00	6.45	60.05	...	6.20	6.20	6.20	59.80
16	...	7.40	7.40	7.40	61.00	...	6.40	6.70	6.55	60.15	...	6.10	6.20	6.15	59.75
17	...	7.50	7.50	7.50	61.10	...	6.70	6.70	6.70	60.30	...	6.20	6.10	6.15	59.75
18	...	7.40	7.40	7.40	61.00	...	6.70	6.70	6.70	60.30	...	6.10	6.20	6.15	59.75
19	...	7.40	7.30	7.35	60.95	...	6.70	6.80	6.75	60.35	...	6.30	6.30	6.30	59.90
20	1	7.60	7.80	7.70	61.30	...	6.80	6.90	6.85	60.45	...	6.40	6.40	6.40	60.00
21	2	7.70	7.60	7.65	61.25	...	6.90	6.80	6.85	60.45	...	6.30	6.30	6.30	59.90
22	...	7.30	7.40	7.35	60.95	...	6.70	7.00	6.85	60.45	...	6.00	6.00	6.00	59.60
23	...	7.40	7.40	7.40	61.00	3	6.90	6.90	6.90	60.50	...	6.20	6.30	6.25	59.85
24	...	7.30	7.30	7.30	60.90	...	6.70	6.30	6.50	60.10	...	6.10	6.20	6.15	59.75
25	...	7.20	7.20	7.20	60.80	...	6.60	6.40	6.50	60.10	...	6.00	6.20	6.10	59.70
26	...	7.00	7.00	7.00	60.60	...	6.30	6.50	6.40	60.00	...	6.10	6.10	6.10	59.70
27	...	7.00	6.90	6.95	60.55	...	6.50	6.40	6.45	60.05	...	6.40	6.30	6.35	59.95
28	...	7.10	7.10	7.10	60.70	...	6.20	6.50	6.35	59.95	...	6.10	6.30	6.20	59.80
29	...	7.00	6.90	6.95	60.55	...	6.50	6.50	6.50	60.10	...	6.50	6.20	6.35	59.95
30	...	6.90	7.00	6.95	60.55	...	6.50	6.40	6.45	60.05	...	6.00	6.00	6.00	59.60
31	...	7.00	7.20	7.10	60.70	...	.....	.....	.....	.....	5	5.60	5.90	5.75	59.35

1906	November				December									
1	...	.....	.....	6.00	1059.60	...	.....	.....	.....	.....	...	.....	.....	.....	.....
2	...	.....	.....	.....	.....	...	.....	.....	.....	.....	...	.....	.....	.....	.....
3	...	.....	.....	.....	.....	...	.....	.....	.....	.....	...	.....	.....	.....	.....
4	...	.....	.....	.....	.....	...	.....	.....	.....	.....	...	.....	.....	.....	.....
5	...	.....	.....	.....	.....	...	.....	.....	.....	.....	...	.....	.....	.....	.....
6	...	.....	.....	.....	.....	...	.....	.....	.....	.....	...	.....	.....	.....	.....
7	...	.....	.....	.....	.....	...	.....	.....	5.90	1059.50	...	.....	.....	.....	.....
8	...	.....	.....	.....	.....	...	.....	.....	5.90	59.50	...	.....	.....	.....	.....
9	...	.....	.....	.....	.....	...	.....	.....	5.90	59.50	...	.....	.....	.....	.....
10	...	.....	.....	.....	.....	...	.....	.....	.....	.....	...	.....	.....	.....	.....
11	...	.....	.....	.....	.....	...	.....	.....	.....	.....	...	.....	.....	.....	.....
12	...	.....	.....	.....	.....	...	.....	.....	.....	.....	...	.....	.....	.....	.....
13	...	.....	.....	.....	.....	...	.....	.....	.....	.....	...	.....	.....	.....	.....
14	...	.....	.....	.....	.....	...	.....	.....	.....	.....	...	.....	.....	.....	.....
15	...	.....	.....	.....	.....	...	.....	.....	.....	.....	...	.....	.....	.....	.....
16	...	.....	.....	.....	.....	...	.....	.....	.....	.....	...	.....	.....	.....	.....
17	...	.....	.....	.....	.....	...	.....	.....	.....	.....	...	.....	.....	.....	.....
18	...	.....	.....	.....	.....	...	.....	.....	.....	.....	...	.....	.....	.....	.....
19	...	.....	.....	.....	.....	...	.....	.....	.....	.....	...	.....	.....	.....	.....
20	...	.....	.....	.....	.....	...	.....	.....	.....	.....	...	.....	.....	.....	.....
21	...	.....	.....	.....	.....	...	.....	.....	.....	.....	...	.....	.....	.....	.....
22	...	.....	.....	.....	.....	...	.....	.....	.....	.....	...	.....	.....	.....	.....
23	...	.....	.....	.....	.....	...	.....	.....	.....	.....	...	.....	.....	.....	.....
24	...	.....	.....	.....	.....	...	.....	.....	.....	.....	...	.....	.....	.....	.....
25	...	.....	.....	.....	.....	...	.....	.....	.....	.....	...	.....	.....	.....	.....
26	...	.....	.....	.....	.....	...	.....	.....	.....	.....	...	.....	.....	.....	.....
27	...	.....	.....	.....	.....	...	.....	.....	.....	.....	...	.....	.....	.....	.....
28	...	.....	.....	.....	.....	...	.....	.....	.....	.....	...	.....	.....	.....	.....
29	...	.....	.....	.....	.....	...	.....	.....	.....	.....	...	.....	.....	.....	.....
30	...	.....	.....	.....	.....	...	.....	.....	.....	.....	...	.....	.....	.....	.....
31	...	.....	.....	.....	.....	...	.....	.....	.....	.....	...	.....	.....	.....	.....

1. NE. strong (R. B.)
2. SE. strong (R. B.)
3. E. strong (R. B.)
4. NW. strong (R. B.)
5. S. strong (R. B.)

TABLE 8—Continued

WATER LEVELS—LAKE OF THE WOODS—WARROAD, MINN.

RECORDS OF U. S. WAR DEPARTMENT

1907	JANUARY					FEBRUARY					MARCH				
	Footnote	Gauge Height			Elevation, Sea-level Datum	Footnote	Gauge Height			Elevation, Sea-level Datum	Footnote	Gauge Height			Elevation, Sea-level Datum
		8 a.m.	5 p.m.	Mean			8 a.m.	5 p.m.	Mean			8 a.m.	5 p.m.	Mean	
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															
26															
27															
28									5.00	1058.60					
29															
30															
31				5.30	1058.90									5.00	1058.60

1907	APRIL					MAY					JUNE				
	Footnote	Gauge Height			Elevation, Sea-level Datum	Footnote	Gauge Height			Elevation, Sea-level Datum	Footnote	Gauge Height			Elevation, Sea-level Datum
		8 a.m.	5 p.m.	Mean			8 a.m.	5 p.m.	Mean			8 a.m.	5 p.m.	Mean	
1							5.10	5.10	5.10	1058.70		5.80	5.90	5.85	1059.45
2							5.10	5.10	5.10	58.70		5.70	5.70	5.70	59.30
3						1	5.10	5.10	5.10	58.70		5.90	5.80	5.85	59.45
4							5.10	5.20	5.15	58.75		6.00	5.90	5.95	59.55
5							5.10	5.20	5.15	58.75		5.90	5.90	5.90	59.50
6							5.30	5.20	5.25	58.85		5.90	6.00	5.95	59.55
7							5.20	5.20	5.20	58.80		6.00	6.00	6.00	59.60
8							5.20	5.20	5.20	58.80		6.00	6.00	6.00	59.60
9							5.20	5.20	5.20	58.80		6.10	6.00	6.05	59.65
10							5.20	5.30	5.25	58.85		6.10	6.20	6.15	59.75
11							5.30	5.30	5.30	58.90		6.20	6.20	6.20	59.80
12							5.30	5.30	5.30	58.90		6.20	6.20	6.20	59.80
13							5.30	5.40	5.35	58.95		6.20	6.20	6.20	59.80
14							5.40	5.30	5.35	58.95		6.20	6.20	6.20	59.80
15							5.30	5.40	5.35	58.95		6.20	6.20	6.20	59.80
16							5.30	5.40	5.35	58.95		6.30	6.20	6.25	59.85
17							5.40	5.40	5.40	59.00	2	6.00	5.90	5.95	59.55
18							5.40	5.40	5.40	59.00		6.30	6.20	6.25	59.85
19							5.50	5.50	5.50	59.10		6.20	6.20	6.20	59.80
20							5.50	5.50	5.50	59.10		6.00	6.20	6.10	59.70
21							5.50	5.60	5.55	59.15		6.20	6.20	6.20	59.80
22							5.60	5.60	5.60	59.20		6.30	6.30	6.30	59.90
23							5.60	5.60	5.60	59.20	3	6.40	6.40	6.40	60.00
24							5.70	5.70	5.70	59.30		6.20	6.10	6.15	59.75
25							5.70	5.60	5.65	59.25		6.00	6.20	6.10	59.70
26							6.00	5.80	5.90	59.50		6.30	6.20	6.25	59.85
27							5.70	5.70	5.70	59.30		6.10	6.10	6.10	59.70
28							5.70	5.70	5.70	59.30		6.00	6.30	6.15	59.75
29							5.80	5.70	5.75	59.35		6.50	6.40	6.45	60.05
30				5.10	1058.70		5.80	5.80	5.80	59.40		6.40	6.30	6.35	59.95
31							5.80	5.80	5.80	59.40					

1. River opened up but partly, moved boat to dock (R. B.)

2. W. Strong (R. B.)

3. SE. strong (R. B.)

TABLE 8—Continued

WATER LEVELS—LAKE OF THE WOODS—WARROAD, MINN.

RECORDS OF U. S. WAR DEPARTMENT

1907	JULY					AUGUST					SEPTEMBER				
	Footnote	Gauge Height			Elevation, Sea-level Datum	Footnote	Gauge Height			Elevation, Sea-level Datum	Footnote	Gauge Height			Elevation, Sea-level Datum
		8 a.m.	5 p.m.	Mean			8 a.m.	5 p.m.	Mean			8 a.m.	5 p.m.	Mean	
1	...	6.40	6.40	6.40	1060.00	...	6.50	6.70	6.60	1060.20	...	7.40	7.30	7.35	1060.95
2	...	6.20	6.40	6.30	59.90	...	6.80	6.80	6.80	60.40	...	7.50	7.80	7.65	61.25
3	...	6.40	6.40	6.40	60.00	...	6.70	6.60	6.65	60.25	...	7.50	7.60	7.55	61.15
4	...	6.50	6.40	6.45	60.05	...	6.50	6.70	6.60	60.20	...	7.50	7.50	7.50	61.10
5	...	6.40	6.30	6.35	59.95	...	6.40	6.70	6.55	60.15	...	7.40	7.50	7.45	61.05
6	...	6.30	6.30	6.30	59.90	...	6.60	6.50	6.55	60.15	...	7.50	7.50	7.50	61.10
7	...	6.30	6.20	6.25	59.85	...	6.70	6.80	6.75	60.35	...	7.50	7.50	7.50	61.10
8	...	6.30	6.30	6.30	59.90	...	6.70	6.70	6.70	60.30	...	7.50	7.70	7.60	61.20
9	...	6.40	6.50	6.45	60.05	...	6.80	6.80	6.80	60.40	...	7.70	7.70	7.70	61.30
10	...	6.50	6.50	6.50	60.10	...	6.80	6.80	6.80	60.40	...	7.60	7.50	7.55	61.15
11	...	6.40	6.50	6.45	60.05	2	5.90	5.90	5.90	59.50	...	7.60	7.70	7.65	61.25
12	...	6.30	6.30	6.30	59.90	...	6.70	6.90	6.80	60.40	...	7.80	7.90	7.85	61.45
13	...	6.30	6.40	6.35	59.95	...	7.10	7.10	7.10	60.70	5	8.20	8.00	8.10	61.70
14	...	6.20	6.40	6.30	59.90	...	7.10	7.50	7.30	60.90	...	7.70	7.70	7.70	61.30
15	...	6.40	6.40	6.40	60.00	...	7.20	6.90	7.05	60.65	...	7.70	7.80	7.75	61.35
16	...	6.40	6.40	6.40	60.00	3	6.50	6.90	6.70	60.30	...	7.80	7.80	7.80	61.40
17	...	6.30	6.30	6.30	59.90	...	7.20	7.20	7.20	60.80	...	7.80	7.90	7.85	61.45
18	...	6.40	6.40	6.40	60.00	...	7.10	7.20	7.15	60.75	...	7.80	7.80	7.80	61.40
19	...	6.50	6.50	6.50	60.10	4	6.80	6.50	6.65	60.25	...	8.00	8.00	8.00	61.60
20	...	6.40	6.40	6.40	60.00	...	7.10	7.10	7.10	60.70	...	7.80	7.60	7.70	61.30
21	...	6.50	6.60	6.55	60.15	...	7.20	7.20	7.20	60.80	...	7.50	8.00	7.75	61.35
22	...	6.60	6.50	6.55	60.15	...	7.10	7.20	7.15	60.75	...	8.00	8.50	8.25	61.85
23	...	6.30	6.50	6.40	60.00	...	7.20	7.00	7.10	60.70	...	8.00	8.10	8.05	61.65
24	...	6.60	6.70	6.65	60.25	...	7.00	7.30	7.15	60.75	...	8.20	8.20	8.20	61.80
25	...	6.40	6.80	6.60	60.20	...	7.40	7.40	7.40	61.00	...	8.10	8.10	8.10	61.70
26	...	6.70	6.50	6.60	60.20	...	7.50	7.50	7.50	61.10	...	8.30	8.30	8.30	61.90
27	1	6.30	6.30	6.30	59.90	...	7.30	7.30	7.30	60.90	...	8.30	8.30	8.30	61.90
28	...	6.50	6.60	6.55	60.15	...	7.40	7.30	7.35	60.95	...	8.30	8.10	8.20	61.80
29	...	6.60	6.60	6.60	60.20	...	7.40	7.40	7.40	61.00	6	7.90	7.80	7.85	61.45
30	...	6.70	6.70	6.70	60.30	...	7.40	7.50	7.45	61.05	...	8.00	8.20	8.10	61.70
31	...	6.60	6.50	6.55	60.15	...	7.40	7.40	7.40	61.00	...	.....	.....	.....	.....

1907	OCTOBER				*NOVEMBER				DECEMBER				
1	...	8.40	8.50	8.45	1062.05	...	8.50	.....	.....	1062.10	...	.....	.....	8.50	1062.10
2	...	8.50	8.50	8.50	62.10	...	8.60	.....	.....	62.20	...	.....	.....	8.50	62.10
3	...	8.50	8.40	8.45	62.05	...	8.50	.....	.....	62.10	...	.....	.....	8.50	62.10
4	...	8.30	8.50	8.40	62.00	...	8.50	.....	.....	62.10	...	.....	.....	8.50	62.10
5	...	8.60	8.60	8.60	62.20	...	8.50	.....	.....	62.10	...	.....	.....	8.50	62.10
6	...	8.70	8.70	8.70	62.30	...	8.60	.....	.....	62.20	...	.....	.....	8.50	62.10
7	...	8.80	8.70	8.75	62.35	...	8.40	.....	.....	62.00	...	.....	.....	8.50	62.10
8	...	8.40	8.50	8.45	62.05	...	8.50	.....	.....	62.10	...	.....	.....	8.50	62.10
9	...	8.80	8.70	8.75	62.35	...	8.60	.....	.....	62.20	...	.....	.....	8.50	62.10
10	...	8.50	8.70	8.60	62.20	8	8.50	.....	.....	62.10	...	.....	.....	8.50	62.10
11	...	8.90	8.80	8.85	62.45	...	8.70	.....	.....	62.30	...	.....	.....	8.50	62.10
12	...	8.70	8.70	8.70	62.30	...	7.90	.....	.....	61.50	...	.....	.....	8.50	62.10
13	...	8.40	8.60	8.50	62.10	...	8.60	.....	.....	62.20	...	.....	.....	8.50	62.10
14	...	8.70	8.70	8.70	62.30	9	8.50	.....	.....	62.10	...	.....	.....	8.50	62.10
15	...	8.80	8.70	8.75	62.35	...	8.60	.....	.....	62.20	...	.....	.....	8.50	62.10
16	...	8.70	8.80	8.75	62.35	...	8.40	.....	.....	62.00	...	.....	.....	8.40	62.00
17	...	8.80	8.80	8.80	62.40	...	8.40	.....	.....	62.00	...	.....	.....	8.40	62.00
18	...	8.60	8.70	8.65	62.25	...	8.60	.....	.....	62.20	...	.....	.....	8.40	62.00
19	...	8.80	8.90	8.85	62.45	...	8.50	.....	.....	62.10	...	.....	.....	8.40	62.00
20	...	8.70	8.70	8.70	62.30	...	8.60	.....	.....	62.20	...	.....	.....	8.40	62.00
21	7	8.30	8.40	8.35	61.95	...	8.50	.....	.....	62.10	...	.....	.....	8.40	62.00
22	...	8.60	8.50	8.55	62.15	...	8.50	.....	.....	62.10	...	.....	.....	8.40	62.00
23	...	8.50	8.50	8.50	62.10	...	8.50	.....	.....	62.10	...	.....	.....	8.40	62.00
24	...	8.50	8.50	8.50	62.10	...	8.50	.....	.....	62.10	...	.....	.....	8.40	62.00
25	...	8.70	8.60	8.65	62.25	...	8.40	.....	.....	62.00	...	.....	.....	8.40	62.00
26	...	8.50	8.50	8.50	62.10	...	8.60	.....	.....	62.20	...	.....	.....	8.40	62.00
27	...	8.50	8.50	8.50	62.10	...	8.60	.....	.....	62.20	...	.....	.....	8.40	62.00
28	...	8.40	8.50	8.45	62.05	...	8.60	.....	.....	62.20	...	.....	.....	8.40	62.00
29	...	8.80	8.70	8.75	62.35	...	8.50	.....	.....	62.10	...	.....	.....	8.40	62.00
30	...	8.60	8.70	8.65	62.25	...	8.50	.....	.....	62.10	...	.....	.....	8.40	62.00
31	...	8.60	8.50	8.55	62.15	...	.....	.....	.....	.....	...	.....	.....	8.40	62.00

*From Nov. 1st, 1907, to Apr. 1st, 1908, no entries in the Gauge Readers book were made. The original notes from which the monthly reports were prepared by Sawyer have not been located. Engrs.

1. NW. *strong* (R. B.) 2. SW. strong (R. B.) 3. NW. strong (R. B.) 4. W. strong (R. B.) 5. E. strong (R. B.) 6. SW. strong (R. B.) 7. Gauge reading from the 21st taken at Warroad. Look on next page for readings for the first of the month at Warroad (R. B.) 8. Light snow, river frozen over (S.) 9. Ice formed to outer end of channel (S.)

TABLE 8—Continued

WATER LEVELS—LAKE OF THE WOODS—WARROAD, MINN.

RECORDS OF U. S. WAR DEPARTMENT

1908	JANUARY					FEBRUARY					MARCH				
	Footnote	Gauge Height			Elevation, Sea-level Datum	Footnote	Gauge Height			Elevation, Sea-level Datum	Footnote	Gauge Height			Elevation, Sea-level Datum
		8 a.m.	5 p.m.	Mean			8 a.m.	6 p.m.	Mean			8 a.m.	5 p.m.	Mean	
1	...	8.40	.....	.....	1062.00	...	8.00	.....	.....	1061.60	...	7.80	.....	.....	1061.40
2	...	8.40	.....	.....	62.00	...	8.00	.....	.....	61.60	...	7.80	.....	.....	61.40
3	...	8.40	.....	.....	62.00	...	8.00	.....	.....	61.60	...	7.80	.....	.....	61.40
4	...	8.30	.....	.....	61.90	...	8.00	.....	.....	61.60	...	7.70	.....	.....	61.30
5	...	8.30	.....	.....	61.90	...	8.00	.....	.....	61.60	...	7.70	.....	.....	61.30
6	...	8.30	.....	.....	61.90	...	8.00	.....	.....	61.60	...	7.60	.....	.....	61.20
7	...	8.30	.....	.....	61.90	...	8.00	.....	.....	61.60	...	7.60	.....	.....	61.20
8	...	8.30	.....	.....	61.90	...	8.00	.....	.....	61.60	...	7.60	.....	.....	61.20
9	...	8.30	.....	.....	61.90	...	8.00	.....	.....	61.60	...	7.60	.....	.....	61.20
10	...	8.30	.....	.....	61.90	...	8.00	.....	.....	61.60	...	7.60	.....	.....	61.20
11	...	8.30	.....	.....	61.90	...	8.00	.....	.....	61.60	...	7.60	.....	.....	61.20
12	...	8.30	.....	.....	61.90	...	8.00	.....	.....	61.60	...	7.60	.....	.....	61.20
13	...	8.30	.....	.....	61.90	...	8.00	.....	.....	61.60	...	7.60	.....	.....	61.20
14	...	8.20	.....	.....	61.80	...	8.00	.....	.....	61.60	...	7.60	.....	.....	61.20
15	...	8.20	.....	.....	61.80	...	7.90	.....	.....	61.50	...	7.50	.....	.....	61.10
16	...	8.20	.....	.....	61.80	...	7.90	.....	.....	61.50	...	7.50	.....	.....	61.10
17	...	8.20	.....	.....	61.80	...	7.90	.....	.....	61.50	...	7.50	.....	.....	61.10
18	...	8.20	.....	.....	61.80	...	7.90	.....	.....	61.50	...	7.50	.....	.....	61.10
19	...	8.20	.....	.....	61.80	...	7.90	.....	.....	61.50	...	7.50	.....	.....	61.10
20	...	8.20	.....	.....	61.80	...	7.90	.....	.....	61.50	...	7.50	.....	.....	61.10
21	...	8.20	.....	.....	61.80	...	7.90	.....	.....	61.50	...	7.50	.....	.....	61.10
22	...	8.20	.....	.....	61.80	...	7.90	.....	.....	61.50	...	7.40	.....	.....	61.00
23	...	8.20	.....	.....	61.80	...	7.90	.....	.....	61.50	...	7.40	.....	.....	61.00
24	...	8.10	.....	.....	61.70	...	7.90	.....	.....	61.50	...	7.40	.....	.....	61.00
25	...	8.10	.....	.....	61.70	...	7.90	.....	.....	61.50	...	7.40	.....	.....	61.00
26	...	8.10	.....	.....	61.70	...	7.80	.....	.....	61.40	...	7.40	.....	.....	61.00
27	...	8.10	.....	.....	61.70	...	7.80	.....	.....	61.40	...	7.40	.....	.....	61.00
28	...	8.10	.....	.....	61.70	...	7.80	.....	.....	61.40	...	7.40	.....	.....	61.00
29	...	8.10	.....	.....	61.70	...	7.80	.....	.....	61.40	...	7.40	.....	.....	61.00
30	...	8.00	.....	.....	61.60	...	.....	.....	.....	.....	...	7.30	.....	.....	60.90
31	...	7.90	.....	.....	61.50	...	.....	.....	.....	.....	...	7.30	.....	.....	60.90

1908	APRIL					MAY					JUNE				
1	...	7.30	.....	.....	1060.90	...	7.40	7.50	7.45	1061.05	...	7.90	7.90	7.90	1061.50
2	...	7.30	.....	.....	60.90	...	7.50	7.40	7.45	61.05	...	7.90	7.80	7.85	61.45
3	...	7.30	.....	.....	60.90	...	7.50	7.50	7.50	61.10	...	7.90	7.90	7.90	61.50
4	...	7.30	.....	.....	60.90	...	7.50	7.50	7.50	61.10	...	7.90	7.80	7.85	61.45
5	...	7.20	.....	.....	60.80	...	7.50	7.50	7.50	61.10	...	7.70	7.70	7.70	61.30
6	...	7.20	.....	.....	60.80	...	7.50	7.50	7.50	61.10	...	7.90	7.90	7.90	61.50
7	...	7.20	.....	.....	60.80	...	7.50	7.50	7.50	61.10	...	8.00	7.90	7.95	61.55
8	...	7.20	.....	.....	60.80	...	7.50	7.50	7.50	61.10	...	8.00	7.90	7.95	61.55
9	...	7.10	.....	.....	60.70	...	7.50	7.50	7.50	61.10	...	8.00	8.00	8.00	61.60
10	...	7.10	.....	.....	60.70	...	7.50	7.60	7.55	61.15	...	7.90	7.80	7.85	61.45
11	...	7.10	.....	.....	60.70	...	7.60	7.60	7.60	61.20	...	7.70	7.70	7.70	61.30
12	...	7.20	.....	.....	60.80	...	7.70	7.80	7.75	61.35	...	7.90	7.80	7.85	61.45
13	...	7.20	.....	.....	60.80	...	7.70	7.70	7.70	61.30	3	7.50	7.40	7.45	61.05
14	...	7.20	.....	.....	60.80	...	7.60	7.70	7.65	61.25	...	8.00	7.90	7.95	61.55
15	...	7.20	.....	.....	60.80	...	7.60	7.50	7.55	61.15	...	7.90	7.90	7.90	61.50
16	...	7.20	.....	.....	60.80	...	7.50	7.50	7.50	61.10	...	7.90	7.90	7.90	61.50
17	...	7.20	.....	.....	60.80	...	7.60	7.70	7.65	61.25	...	7.90	7.90	7.90	61.50
18	...	7.30	.....	.....	60.90	...	7.60	7.40	7.50	61.10	...	7.80	7.80	7.80	61.40
19	...	7.30	.....	.....	60.90	...	7.50	7.60	7.55	61.15	...	7.70	7.80	7.75	61.35
20	...	7.20	7.30	7.25	60.85	...	8.20	9.10	8.65	62.25	...	8.00	8.10	8.05	61.65
21	...	7.30	7.30	7.30	60.90	...	7.60	7.10	7.35	60.95	...	8.00	8.00	8.00	61.60
22	...	7.20	7.20	7.20	60.80	1	7.10	7.40	7.25	60.85	...	8.10	8.00	8.05	61.65
23	...	7.30	7.30	7.30	60.90	...	7.60	7.70	7.65	61.25	...	8.00	7.90	7.95	61.55
24	...	7.30	7.30	7.30	60.90	...	7.80	7.90	7.85	61.45	...	8.10	8.10	8.10	61.70
25	...	7.30	7.30	7.30	60.90	...	8.10	7.70	7.90	61.50	...	7.90	7.90	7.90	61.50
26	...	7.40	7.40	7.40	61.00	...	7.70	7.70	7.70	61.30	...	7.80	7.80	7.80	61.40
27	...	7.40	7.40	7.40	61.00	...	7.70	7.80	7.75	61.35	...	7.80	7.80	7.80	61.40
28	...	7.40	7.40	7.40	61.00	...	7.80	7.90	7.85	61.45	...	8.00	7.40	7.70	61.30
29	...	7.40	7.40	7.40	61.00	...	8.00	8.00	8.00	61.60	...	7.80	7.80	7.80	61.40
30	...	7.40	7.40	7.40	61.00	2	8.10	8.00	8.05	61.65	...	8.00	8.10	8.05	61.65
31	...	.....	.....	.....	.....	...	7.90	7.90	7.90	61.50	...	.....	.....	.....	.....

1. W. strong (R. B.) 2. NE. strong (R. B.) 3. NW. strong (R. B.)

TABLE 8—Continued

WATER LEVELS—LAKE OF THE WOODS—WARROAD, MINN.

RECORDS OF U. S. WAR DEPARTMENT

1908	JULY					AUGUST					SEPTEMBER				
	Footnote	Gauge Height			Elevation, Sea-level Datum	Footnote	Gauge Height			Elevation, Sea-level Datum	Footnote	Gauge Height			Elevation, Sea-level Datum.
		8 a.m.	5 p.m.	Mean			8 a.m.	5 p.m.	Mean			8 a.m.	5 p.m.	Mean	
1	...	8.00	8.00	8.00	1061.60	...	7.80	7.70	7.75	1061.35	...	6.70	7.20	6.95	1060.55
2	...	7.90	7.90	7.90	61.50	...	7.80	7.30	7.60	61.20	...	6.70	7.10	6.90	60.50
3	...	7.90	7.90	7.90	61.50	...	7.30	7.20	7.25	60.85	...	6.80	7.00	6.90	60.50
4	...	7.90	7.80	7.85	61.45	...	7.20	7.30	7.25	60.85	...	7.00	7.10	7.05	60.65
5	...	7.90	7.90	7.90	61.50	...	7.40	7.50	7.45	61.05	...	6.90	6.80	6.85	60.45
6	...	8.00	8.00	8.00	61.60	...	7.60	7.50	7.55	61.15	...	7.00	7.00	7.00	60.60
7	...	7.80	7.80	7.80	61.40	...	7.50	7.50	7.50	61.10	...	7.00	7.00	7.00	60.60
8	...	7.60	7.70	7.65	61.25	...	7.30	7.50	7.40	61.00	...	7.10	7.10	7.10	60.70
9	...	7.80	7.40	7.60	61.20	...	7.50	7.50	7.50	61.10	...	6.90	7.10	7.00	60.60
10	...	7.80	7.80	7.80	61.40	...	7.40	7.50	7.45	61.05	...	6.70	7.10	6.90	60.50
11	...	7.80	7.70	7.75	61.35	...	7.50	7.50	7.50	61.10	...	7.00	7.00	7.00	60.60
12	...	7.80	7.80	7.80	61.40	...	7.50	7.40	7.45	61.05	...	7.00	7.10	7.05	60.65
13	...	7.70	7.60	7.65	61.25	...	7.50	7.40	7.45	61.05	...	7.10	7.10	7.10	60.70
14	...	7.70	7.70	7.70	61.30	...	7.40	7.40	7.40	61.00	...	7.20	7.00	7.10	60.70
15	...	7.70	7.70	7.70	61.30	...	7.40	7.30	7.35	60.95	...	6.70	6.90	6.80	60.40
16	...	7.60	7.70	7.65	61.25	...	7.20	7.00	7.10	60.70	...	6.90	6.90	6.90	60.50
17	...	7.70	7.70	7.70	61.30	...	7.00	7.10	7.05	60.65	...	6.80	7.10	6.95	60.55
18	...	7.60	7.70	7.65	61.25	...	6.90	7.40	7.15	60.75	...	6.90	7.10	7.00	60.60
19	...	7.70	7.50	7.60	61.20	...	7.20	7.20	7.20	60.80	...	7.10	7.10	7.10	60.70
20	...	7.40	7.40	7.40	61.00	...	7.00	7.00	7.00	60.60	...	6.90	7.00	6.95	60.55
21	...	7.60	7.60	7.60	61.20	...	7.00	6.90	6.95	60.55	...	6.90	6.90	6.90	60.50
22	...	7.60	7.70	7.65	61.25	...	6.90	7.10	7.00	60.60	...	6.70	6.50	6.60	60.20
23	...	7.70	7.70	7.70	61.30	...	7.10	7.00	7.05	60.65	...	6.80	6.90	6.85	60.45
24	...	7.70	7.70	7.70	61.30	...	7.00	7.10	7.05	60.65	3	7.40	7.50	7.45	61.05
25	...	7.70	7.40	7.55	61.15	...	7.00	7.20	7.10	60.70	4	7.80	7.00	7.40	61.00
26	...	7.50	7.60	7.55	61.15	...	7.10	6.80	6.95	60.55	...	7.20	7.00	7.10	60.70
27	...	7.70	7.70	7.70	61.30	...	6.90	6.80	6.85	60.45	...	6.70	6.70	6.70	60.30
28	...	7.70	7.70	7.70	61.30	...	7.00	7.00	7.00	60.60	...	6.80	7.00	6.90	60.50
29	...	7.70	7.50	7.60	61.20	...	7.20	7.00	7.10	60.70	...	6.70	6.90	6.80	60.40
30	...	7.50	7.70	7.60	61.20	1	6.90	7.60	7.25	60.85	...	7.00	7.00	7.00	60.60
31	...	7.50	7.60	7.55	61.15	2	6.50	6.80	6.65	60.25	...	.....	.....	.....	.....

1908	OCTOBER					NOVEMBER					DECEMBER				
1	...	6.80	6.70	6.75	1060.35	...	6.40	6.60	6.50	1060.10	13	6.30	.....	.....	1059.90
2	...	6.80	6.70	6.75	60.35	...	6.50	6.50	6.50	60.10	...	6.30	.....	.....	59.90
3	5	7.20	7.50	7.35	60.95	...	6.70	6.70	6.70	60.30	...	6.20	.....	.....	59.80
4	...	7.00	6.80	6.90	60.50	...	6.70	6.70	6.70	60.30	...	6.20	.....	.....	59.80
5	...	6.80	6.30	6.55	60.15	...	6.40	6.40	6.40	60.00	...	6.20	.....	.....	59.80
6	...	6.70	6.50	6.60	60.20	...	6.50	6.50	6.50	60.10	...	6.20	.....	.....	59.80
7	...	6.70	6.80	6.75	60.35	...	6.40	6.30	6.35	59.95	...	6.30	.....	.....	59.90
8	...	6.60	6.70	6.65	60.25	...	6.20	5.90	6.05	59.65	...	6.30	.....	.....	59.90
9	...	6.70	6.60	6.65	60.25	10	6.20	6.40	6.30	59.90	...	6.30	.....	.....	59.90
10	...	6.60	6.80	6.70	60.30	...	6.30	6.30	6.30	59.90	...	6.20	.....	.....	59.80
11	...	6.60	6.50	6.55	60.15	...	6.30	6.20	6.25	59.85	...	6.20	.....	.....	59.80
12	...	6.50	6.50	6.50	60.10	...	6.50	6.60	6.55	60.15	...	6.20	.....	.....	59.80
13	...	6.60	6.60	6.60	60.20	...	6.60	6.50	6.55	60.15	...	6.20	.....	.....	59.80
14	...	6.50	6.70	6.60	60.20	...	6.30	6.30	6.30	59.90	...	6.20	.....	.....	59.80
15	...	6.60	6.70	6.65	60.25	...	6.30	6.30	6.30	59.90	...	6.20	.....	.....	59.80
16	...	6.80	6.60	6.70	60.30	...	6.20	6.30	6.25	59.85	...	6.20	.....	.....	59.80
17	6	7.00	7.00	7.00	60.60	...	6.30	6.10	6.20	59.80	...	6.20	.....	.....	59.80
18	...	6.60	6.70	6.65	60.25	...	6.20	6.00	6.10	59.70	14	6.20	.....	.....	59.80
19	...	6.60	6.90	6.75	60.35	...	6.30	6.30	6.30	59.90	...	6.20	.....	.....	59.80
20	...	6.70	6.70	6.70	60.30	...	6.20	6.20	6.20	59.80	...	6.20	.....	.....	59.80
21	7	6.50	6.20	6.35	59.95	...	6.30	6.30	6.30	59.90	15	6.20	.....	.....	59.80
22	...	6.40	6.50	6.45	60.05	...	6.30	6.30	6.30	59.90	...	6.10	.....	.....	59.70
23	...	6.60	6.60	6.60	60.20	11	6.60	6.60	6.60	60.20	...	6.20	.....	.....	59.80
24	...	6.70	6.80	6.75	60.35	...	6.80	6.80	6.80	60.40	...	6.20	.....	.....	59.80
25	8	7.00	7.00	7.00	60.60	...	6.60	6.50	6.55	60.15	...	6.20	.....	.....	59.80
26	...	6.80	6.70	6.75	60.35	...	6.50	6.30	6.40	60.00	...	6.10	.....	.....	59.70
27	...	6.60	6.50	6.55	60.15	...	6.20	6.00	6.10	59.70	...	6.20	.....	.....	59.80
28	...	6.50	6.30	6.40	60.00	...	6.00	6.00	6.00	59.60	...	6.20	.....	.....	59.80
29	9	6.50	6.50	6.50	60.10	...	6.10	6.20	6.15	59.75	...	6.20	.....	.....	59.80
30	...	6.60	6.60	6.60	60.20	12	6.30	6.30	6.30	59.90	...	6.10	.....	.....	59.70
31	...	6.50	6.50	6.50	60.10	...	.....	.....	.....	.....	...	6.20	.....	.....	59.80

1. E. strong (R. B.) (S.) 2. W. very strong (R. B.) 3. E. very strong (R. B.) (S.) 4. NW. light (R. B.) (S.) 5. NE. very strong (R. B.) (S.) 6. N. very strong (R. B.) (S.) 7. SW. very strong (R. B.) (S.) 8. N. light (R. B.) (S.) 9. Ice ½ inch thick close to shore (R. B.) 10. Ice formed all over bay ¾ inch thick (R. B.) 11. Steel laid into Warroad at 11 o'clock (R. B.) 12. NW. very strong (R. B.) (S.) 13. Lake frozen over (R. B.) (S.) 14. First passenger train, Great Northern, arrived at Warroad 3.15 p. m. (R. B.) 15. Road opened to traffic (R. B.)

TABLE 8—Continued

WATER LEVELS—LAKE OF THE WOODS—WARROAD, MINN.

RECORDS OF U. S. WAR DEPARTMENT

1909	JANUARY			FEBRUARY			MARCH			APRIL		
	Footnote	Gauge Height, 8 a. m.	Elevation, Sea-level Datum	Footnote	Gauge Height, 8 a. m.	Elevation, Sea-level Datum	Footnote	Gauge Height, 8 a. m.	Elevation, Sea-level Datum	Footnote	Gauge Height, 8 a. m.	Elevation, Sea-level Datum
1	....	6.20	1059.80	....	6.00	1059.60	....	5.80	1059.40	....	5.50	1059.10
2	....	6.20	59.80	....	6.00	59.60	....	5.80	59.40	....	5.50	59.10
3	....	6.20	59.80	....	6.00	59.60	....	5.70	59.30	....	5.50	59.10
4	....	6.20	59.80	....	6.00	59.60	....	5.70	59.30	....	5.50	59.10
5	....	6.20	59.80	....	6.00	59.60	....	5.70	59.30	....	5.40	59.00
6	....	6.20	59.80	....	6.00	59.60	....	5.70	59.30	....	5.40	59.00
7	....	6.20	59.80	....	6.00	59.60	....	5.70	59.30	....	5.40	59.00
8	....	6.20	59.80	....	6.00	59.60	....	5.70	59.30	....	5.40	59.00
9	....	6.20	59.80	....	6.00	59.60	....	5.70	59.30	....	5.40	59.00
10	....	6.20	59.80	....	5.90	59.50	....	5.70	59.30	....	5.40	59.00
11	....	6.20	59.80	....	5.90	59.50	....	5.60	59.20	....	5.40	59.00
12	....	6.20	59.80	....	5.90	59.50	....	5.60	59.20	....	5.40	59.00
13	....	6.20	59.80	....	5.90	59.50	....	5.60	59.20	....	5.40	59.00
14	....	6.20	59.80	....	5.90	59.50	....	5.60	59.20	....	5.40	59.00
15	....	6.20	59.80	....	5.90	59.50	....	5.60	59.20	....	5.40	59.00
16	....	6.10	59.70	....	5.90	59.50	....	5.60	59.20	....	5.40	59.00
17	....	6.10	59.70	....	5.90	59.50	....	5.60	59.20	....	5.40	59.00
18	....	6.10	59.70	....	5.90	59.50	....	5.60	59.20	....	5.30	58.90
19	....	6.10	59.70	....	5.90	59.50	....	5.60	59.20	....	5.30	58.90
20	....	6.10	59.70	....	5.90	59.50	....	5.60	59.20	....	5.30	58.90
21	....	6.10	59.70	....	5.80	59.40	....	5.60	59.20	....	5.30	58.90
22	....	6.10	59.70	....	5.80	59.40	....	5.60	59.20	....	5.30	58.90
23	....	6.10	59.70	....	5.80	59.40	....	5.60	59.20	....	5.30	58.90
24	....	6.10	59.70	....	5.80	59.40	....	5.50	59.10	....	5.30	58.90
25	....	6.10	59.70	....	5.80	59.40	....	5.50	59.10	....	5.30	58.90
26	....	6.10	59.70	....	5.80	59.40	....	5.50	59.10	....	5.30	58.90
27	....	6.10	59.70	....	5.80	59.40	....	5.50	59.10	....	5.20	58.80
28	....	6.10	59.70	....	5.80	59.40	....	5.50	59.10	....	5.20	58.80
29	....	6.10	59.70	....	.....	.....	....	5.50	59.10	....	5.20	58.80
30	....	6.10	59.70	....	.....	.....	....	5.50	59.10	....	5.20	58.80
31	....	6.10	59.70	....	.....	.....	....	5.50	59.10	....	.....	.....

1909	MAY			JUNE			JULY			AUGUST		
1	....	5.20	1058.80	....	5.90	1059.50	....	6.20	1059.80	....	6.20	1059.80
2	....	5.20	58.80	....	5.90	59.50	....	6.40	60.00	....	6.30	59.90
3	....	5.20	58.80	....	5.90	59.50	....	6.20	59.80	....	6.30	59.90
4	1	5.20	58.80	....	5.90	59.50	....	6.20	59.80	....	6.30	59.90
5	....	5.20	58.80	....	6.00	59.60	....	6.10	59.70	....	6.30	59.90
6	....	5.20	58.80	....	6.30	59.90	....	6.20	59.80	....	6.50	60.10
7	....	5.20	58.80	....	6.00	59.60	....	6.15	59.75	....	6.40	60.00
8	....	5.20	58.80	....	5.90	59.50	....	6.20	59.80	....	6.40	60.00
9	....	5.30	58.90	....	6.00	59.60	5	5.70	59.30	....	6.40	60.00
10	....	5.30	58.90	....	6.00	59.60	....	6.30	59.90	....	6.50	60.10
11	....	5.40	59.00	....	5.85	59.45	....	6.20	59.80	....	6.45	60.05
12	....	5.40	59.00	....	5.80	59.40	....	6.20	59.80	....	6.40	60.00
13	....	5.40	59.00	....	6.35	59.95	....	6.30	59.90	....	6.30	59.90
14	....	5.40	59.00	....	5.90	59.50	....	6.45	60.05	....	6.40	60.00
15	....	5.50	59.10	....	5.60	59.20	....	6.10	59.70	....	6.40	60.00
16	....	5.70	59.30	....	5.80	59.40	....	6.30	59.90	....	6.40	60.00
17	....	5.80	59.40	....	6.00	59.60	....	6.00	59.60	....	6.20	59.80
18	....	5.70	59.30	....	5.90	59.50	....	6.30	59.90	....	6.10	59.70
19	....	5.80	59.40	3	5.60	59.20	6	6.70	60.30	....	6.20	59.80
20	....	5.80	59.40	....	6.00	59.60	....	6.30	59.90	....	6.20	59.80
21	....	5.80	59.40	....	6.00	59.60	....	6.30	59.90	....	6.30	59.90
22	....	5.90	59.50	....	5.90	59.50	....	6.40	60.00	....	6.50	60.10
23	2	5.90	59.50	....	5.90	59.50	....	6.30	59.90	....	6.40	60.00
24	....	5.90	59.50	....	5.80	59.40	....	6.30	59.90	7	6.70	60.30
25	....	5.90	59.50	....	6.10	59.70	....	6.20	59.80	....	6.50	60.10
26	....	5.90	59.50	....	6.30	59.90	....	6.20	59.80	....	6.50	60.10
27	....	5.90	59.50	....	6.20	59.80	....	6.20	59.80	....	6.20	59.80
28	....	5.90	59.50	....	6.20	59.80	....	6.00	59.60	....	6.30	59.90
29	....	5.90	59.50	4	5.80	59.40	....	6.00	59.60	....	6.50	60.10
30	....	6.20	59.80	....	6.30	59.90	....	6.20	59.80	....	6.30	59.90
31	....	6.10	59.70	....	.....	.....	....	6.35	59.95	....	6.40	60.10

1. Crossed on ice to dredge (R. B.) 2. Lake clear of ice. Boats *Rover* and *Mapuk* to Kenora (R. B.) 3. W. strong (R. B.) (S.) 4. S. very strong, rain —1 inch, in early morning between 1 and 6 a. m., high wind, heavy lightning and thunder (S.) 5. W. strong (R. B.) (S.) 6. SE. strong (R. B.) (S.) 7. E. strong (R. B.) (S.)

TABLE 8—Continued

WATER LEVELS—LAKE OF THE WOODS—WARROAD, MINN.

RECORDS OF U. S. WAR DEPARTMENT

1909	September			October			November			December		
	Footnote	Gauge Height, 8 a. m.	Elevation, Sea-level Datum	Footnote	Gauge Height, 8 a. m.	Elevation, Sea-level Datum	Footnote	Gauge Height, 8 a. m.	Elevation, Sea-level Datum	Footnote	Gauge Height, 8 a. m.	Elevation, Sea level Datum
1	....	6.10	1059.70	....	6.40	1060.00	....	6.80	1060.40	....	6.70	1060.30
2	....	6.30	59.90	....	6.40	60.00	....	6.70	60.30	....	6.80	60.40
3	....	6.40	60.00	....	6.40	60.00	....	6.50	60.10	....	6.70	60.30
4	....	6.40	60.00	....	6.40	60.00	....	6.80	60.40	....	6.70	60.30
5	1	6.80	60.40	....	6.30	59.90	....	6.80	60.40	....	6.80	60.40
6	....	6.30	59.90	....	6.30	59.90	....	6.80	60.40	....	6.80	60.40
7	2	6.80	60.40	....	6.30	59.90	....	6.50	60.10	....	6.90	60.50
8	....	6.30	59.90	....	6.20	59.80	....	6.80	60.40	....	6.90	60.50
9	....	6.40	60.00	4	6.70	60.30	....	6.50	60.10	....	6.90	60.50
10	....	6.30	59.90	5	6.80	60.40	....	6.60	60.20	....	6.90	60.50
11	....	6.30	59.90	6	6.90	60.50	....	6.50	60.10	....	6.90	60.50
12	....	6.10	59.70	....	6.60	60.20	....	6.70	60.30	....	6.90	60.50
13	....	6.20	59.80	7	5.90	59.50	....	7.00	60.60	....	7.00	60.60
14	....	6.20	59.80	....	6.50	60.10	8	8.60	62.20	....	7.00	60.60
15	....	6.20	59.80	....	6.40	60.00	9	6.80	60.40	....	7.00	60.60
16	....	6.40	60.00	....	6.40	60.00	....	6.80	60.40	....	7.00	60.60
17	....	6.40	60.00	....	6.50	60.10	....	6.70	60.30	....	7.00	60.60
18	....	6.10	59.70	....	6.50	60.10	....	6.70	60.30	....	7.00	60.60
19	....	6.10	59.70	....	6.30	59.90	....	6.70	60.30	....	7.00	60.60
20	....	6.20	59.80	....	6.60	60.20	....	6.60	60.20	....	7.00	60.60
21	....	6.40	60.00	....	6.50	60.10	....	6.70	60.30	....	7.00	60.60
22	....	6.40	60.00	....	6.60	60.20	....	6.80	60.40	....	7.10	60.70
23	....	6.30	59.90	....	6.60	60.20	....	6.80	60.40	....	7.10	60.70
24	....	6.50	60.10	....	6.40	60.00	....	6.80	60.40	....	7.10	60.70
25	....	6.50	60.10	....	6.50	60.10	....	6.70	60.30	....	7.10	60.70
26	3	6.20	59.80	....	6.50	60.10	....	6.70	60.30	....	7.10	60.70
27	....	6.30	59.90	....	6.70	60.30	....	6.60	60.20	....	7.10	60.70
28	....	6.40	60.00	....	6.50	60.10	....	6.50	60.10	....	7.10	60.70
29	....	6.60	60.20	....	6.60	60.20	....	6.50	60.10	....	7.10	60.70
30	....	6.50	60.10	....	6.50	60.10	....	6.80	60.40	....	7.10	60.70
31	....			....	6.70	60.30	....			....	7.10	60.70

1910	January			February			March			April		
1	....	7.10	1060.70	....	7.20	1060.80	....	7.10	1060.70	....	7.50	1061.10
2	....	7.10	60.70	....	7.20	60.80	....	7.10	60.70	12	7.60	61.20
3	....	7.10	60.70	....	7.20	60.80	....	7.10	60.70	....	7.60	61.20
4	....	7.10	60.70	....	7.20	60.80	....	7.10	60.70	....	7.50	61.10
5	....	7.10	60.70	....	7.20	60.80	....	7.10	60.70	....	7.60	61.20
6	....	7.10	60.70	....	7.20	60.80	....	7.00	60.60	....	7.60	61.20
7	....	7.10	60.70	....	7.20	60.80	....	7.00	60.60	....	7.60	61.20
8	....	7.20	60.80	....	7.20	60.80	....	7.00	60.60	....	7.60	61.20
9	....	7.20	60.80	....	7.20	60.80	....	7.00	60.60	....	7.60	61.20
10	....	7.20	60.80	....	7.10	60.70	....	7.00	60.60	13	8.20	61.80
11	....	7.20	60.80	....	7.10	60.70	....	7.00	60.60	14	8.10	61.70
12	....	7.20	60.80	....	7.10	60.70	....	7.00	60.60	....	7.60	61.20
13	....	7.20	60.80	....	7.10	60.70	....	7.00	60.60	....	7.70	61.30
14	....	7.20	60.80	....	7.10	60.70	....	7.00	60.60	....	7.70	61.30
15	....	7.20	60.80	....	7.10	60.70	....	7.00	60.60	....	7.60	61.20
16	....	7.20	60.80	....	7.10	60.70	....	7.00	60.60	....	7.70	61.30
17	....	7.20	60.80	....	7.10	60.70	....	7.00	60.60	15	8.30	61.90
18	....	7.20	60.80	....	7.10	60.70	....	7.00	60.60	....	8.00	61.60
19	....	7.20	60.80	....	7.10	60.70	....	7.00	60.60	....	7.80	61.40
20	....	7.20	60.80	....	7.10	60.70	....	7.00	60.60	....	7.90	61.50
21	....	7.20	60.80	....	7.10	60.70	....	7.00	60.60	....	7.70	61.30
22	....	7.20	60.80	....	7.10	60.70	....	7.10	60.70	....	7.90	61.50
23	....	7.20	60.80	....	7.10	60.70	10	7.10	60.70	16	8.40	62.00
24	....	7.20	60.80	....	7.10	60.70	....	7.10	60.70	....	7.90	61.50
25	....	7.20	60.80	....	7.10	60.70	11	7.20	60.80	....	8.00	61.60
26	....	7.20	60.80	....	7.10	60.70	....	7.20	60.80	....	7.90	61.50
27	....	7.20	60.80	....	7.10	60.70	....	7.30	60.90	17	8.30	61.90
28	....	7.20	60.80	....	7.10	60.70	....	7.20	60.80	....	8.00	61.60
29	....	7.20	60.80	....	.....	.....	....	7.50	61.10	....	8.00	61.60
30	....	7.20	60.80	....	.....	.....	....	7.40	61.00	....	7.90	61.50
31	....	7.20	60.80	....	.....	.....	....	7.50	61.10	....	.....	.....

1. SW. very strong (R. B.) (S.) 2. S. very strong (R. B.) (S.) 3. SW. strong (R. B.) (S.) 4. N. strong (R. B.) 5. N. very strong (R. B.) (S.) 6. N. very strong (R. B.) (S.) 7. NW. very strong (R. B.) (S.) 8. N. very strong—strong north wind, water raised 2 feet at Warroad—River froze over during night; has remained so (S.) 9. N. light, lake froze over (R. B.) 10. River open (R. B.) (S.) 11. Bay clear of ice (R. B.) (S.) 12. E. very strong, gale, ice broke up in lake (R. B.) 13. NE. very strong (R. B.) (S.) 14. NE. strong (R. B.) (S.) 15. NE. very strong (R. B.) (S.) 16. N. very strong (R. B.) (S.) 17. NE. strong (R. B.) (S.)

TABLE 8—Continued

WATER LEVELS—LAKE OF THE WOODS—WARROAD, MINN.

RECORDS OF U. S. WAR DEPARTMENT

1910	May			June			July			August		
	Footnote	Gauge Height, 8 a. m.	Elevation, Sea-level Datum	Footnote	Gauge Height, 8 a. m.	Elevation, Sea-level Datum	Footnote	Gauge Height, 8 a. m.	Elevation, Sea-level Datum	Footnote	Gauge Height, 8 a. m.	Elevation, Sea-level Datum
1	....	7.90	1061.50	....	7.40	1061.00	....	6.50	1060.10	....	6.00	1059.60
2	....	8.00	61.60	....	7.50	61.10	....	6.90	60.50	....	5.80	59.40
3	....	8.00	61.60	....	7.30	60.90	....	6.90	60.50	....	6.00	59.60
4	....	7.90	61.50	....	7.20	60.80	....	6.60	60.20	....	6.00	59.60
5	....	7.90	61.50	....	7.30	60.90	....	6.60	60.20	....	5.90	59.50
6	....	7.90	61.50	....	7.30	60.90	....	6.50	60.10	....	5.90	59.50
7	....	7.80	61.40	....	7.30	60.90	....	6.70	60.30	....	5.80	59.40
8	....	7.80	61.40	....	7.10	60.70	....	6.50	60.10	....	5.80	59.40
9	....	7.70	61.30	....	7.30	60.90	....	6.60	60.20	....	5.90	59.50
10	....	7.80	61.40	....	7.20	60.80	....	6.40	60.00	....	5.90	59.50
11	....	7.80	61.40	....	7.20	60.80	....	6.50	60.10	....	5.80	59.40
12	....	7.70	61.30	....	7.10	60.70	....	6.40	60.00	....	5.80	59.40
13	....	7.70	61.30	....	7.10	60.70	....	6.10	59.70	....	5.90	59.50
14	....	7.80	61.40	....	7.00	60.60	....	6.40	60.00	....	5.80	59.40
15	....	7.60	61.20	....	7.00	60.60	....	6.30	59.90	....	5.40	59.00
16	....	7.80	61.40	....	7.00	60.60	3	6.90	60.50	....	5.70	59.30
17	....	7.70	61.30	....	7.10	60.70	....	6.30	59.90	....	5.80	59.40
18	....	7.80	61.40	....	7.10	60.70	....	6.20	59.80	....	5.70	59.30
19	....	7.70	61.30	....	7.10	60.70	....	6.20	59.80	....	5.40	59.00
20	....	7.70	61.30	....	7.00	60.60	....	6.10	59.70	....	5.70	59.30
21	....	7.60	61.20	....	7.00	60.60	....	6.10	59.70	....	5.70	59.30
22	....	7.50	61.10	....	7.00	60.60	....	6.20	59.80	....	5.70	59.30
23	....	7.40	61.00	....	7.10	60.70	....	6.20	59.80	....	5.70	59.30
24	....	7.40	61.00	....	7.00	60.60	....	6.10	59.70	....	5.80	59.40
25	....	7.50	61.10	....	7.10	60.70	....	6.20	59.80	....	5.70	59.30
26	....	7.40	61.00	....	6.90	60.50	....	6.00	59.60	....	5.50	59.10
27	1	7.00	60.60	....	6.90	60.50	....	6.10	59.70	....	5.70	59.30
28	2	7.10	60.70	....	6.80	60.40	....	6.10	59.70	....	5.70	59.30
29	....	7.10	60.70	....	6.80	60.40	....	6.10	59.70	4	5.30	58.90
30	....	7.40	61.00	....	6.70	60.30	....	5.90	59.50	5	3.50	57.10
31	....	7.40	61.00	....	.....	.....	....	5.90	59.50	....	5.30	58.90

1910	September			October			November			December		
1	....	5.60	1059.20	....	5.00	1058.60	9	4.50	1058.10	....	4.40	1058.00
2	....	5.50	59.10	....	5.00	58.60	....	4.70	58.30	....	4.40	58.00
3	....	5.40	59.00	....	4.90	58.50	....	4.50	58.10	....	4.40	58.00
4	....	5.50	59.10	....	4.70	58.30	10	3.90	57.50	....	4.40	58.00
5	....	5.50	59.10	7	4.00	57.60	....	4.40	58.00	....	4.40	58.00
6	....	5.40	59.00	....	4.80	58.40	....	4.50	58.10	....	4.40	58.00
7	....	5.40	59.00	....	4.90	58.50	....	4.60	58.20	....	4.30	57.90
8	....	5.20	58.80	8	5.20	58.80	....	4.50	58.10	....	4.30	57.90
9	....	5.00	58.60	....	5.00	58.60	....	4.40	58.00	....	4.30	57.90
10	....	5.00	58.60	....	4.80	58.40	....	4.30	57.90	....	4.30	57.90
11	6	5.40	59.00	....	5.00	58.60	....	4.40	58.00	....	4.30	57.90
12	....	5.10	58.70	....	5.20	58.80	....	4.50	58.10	....	4.30	57.90
13	....	4.90	58.50	....	4.90	58.50	....	4.50	58.10	....	4.30	57.90
14	....	4.90	58.50	....	4.70	58.30	....	4.50	58.10	....	4.30	57.90
15	....	5.20	58.80	....	4.50	58.10	....	4.50	58.10	....	4.30	57.90
16	....	5.00	58.60	....	4.80	58.40	....	4.40	58.00	....	4.30	57.90
17	....	5.20	58.80	....	4.80	58.40	....	4.50	58.10	....	4.30	57.90
18	....	5.40	59.00	....	4.50	58.10	....	4.40	58.00	....	4.30	57.90
19	....	5.00	58.60	....	4.70	58.30	....	4.50	58.10	....	4.30	57.90
20	....	5.10	58.70	....	4.80	58.40	....	4.50	58.10	....	4.30	57.90
21	....	5.30	58.90	....	4.60	58.20	....	4.50	58.10	....	4.30	57.90
22	....	5.10	58.70	....	4.70	58.30	....	4.40	58.00	....	4.30	57.90
23	....	5.40	59.00	....	4.50	58.10	....	4.40	58.00	....	4.30	57.90
24	....	5.00	58.60	....	4.60	58.20	....	4.40	58.00	....	4.30	57.90
25	....	5.30	58.90	....	4.50	58.10	....	4.40	58.00	....	4.30	57.90
26	....	5.20	58.80	....	4.70	58.30	....	4.50	58.10	....	4.20	57.80
27	....	5.00	58.60	....	4.70	58.30	....	4.40	58.00	....	4.20	57.80
28	....	4.90	58.50	....	4.70	58.30	....	4.40	58.00	....	4.20	57.80
29	....	4.90	58.50	....	4.40	58.00	....	4.40	58.00	....	4.20	57.80
30	....	5.00	58.60	....	4.40	58.00	....	4.40	58.00	....	4.20	57.80
31	....	.....	.....	....	4.60	58.20	....	.....	.....	....	4.20	57.80

1. SW. very strong (R. B.) (S.)
2. SW. very strong (R. B.)
3. E. very strong (R. B.) (S.)
4. SE. very strong (R. B.) (S.)
5. SW. very strong (R. B.) (S.)
6. N. strong (R. B.) (S.)
7. W. strong (R. B.) (S.)
8. W. strong, dense smoke, (R. B.) (S.)
9. Ice one-half inch over bay (S.)
10. W. strong (R. B.) (S.)

TABLE 8—Continued

WATER LEVELS—LAKE OF THE WOODS—WARROAD, MINN.

RECORDS OF U. S. WAR DEPARTMENT

1911	JANUARY					FEBRUARY					MARCH				
	Footnote	Gauge Height			Elevation, Sea-level Datum	Footnote	Gauge Height			Elevation, Sea-level Datum	Footnote	Gauge Height			Elevation, Sea-level Datum
		8 a.m.	7 p.m.	Mean			8 a.m.	7 p.m.	Mean			8 a.m.	7 p.m.	Mean	
1		4.20			1057.80		3.80			1057.40		3.50			1057.10
2		4.20			57.80		3.80			57.40		3.50			57.10
3		4.20			57.80		3.80			57.40		3.50			57.10
4		4.10			57.70		3.80			57.40		3.50			57.10
5		4.10			57.70		3.80			57.40		3.50			57.10
6		4.10			57.70		3.80			57.40		3.50			57.10
7		4.10			57.70		3.80			57.40		3.50			57.10
8		4.10			57.70		3.80			57.40		3.50			57.10
9		4.10			57.70		3.80			57.40		3.50			57.10
10		4.10			57.70		3.80			57.40		3.50			57.10
11		4.10			57.70		3.80			57.40		3.50			57.10
12		4.10			57.70		3.80			57.40		3.40			57.00
13		4.10			57.70		3.80			57.40		3.40			57.00
14		4.00			57.60		3.80			57.40		3.40			57.00
15		4.00			57.60		3.80			57.40		3.40			57.00
16		4.00			57.60		3.80			57.40		3.40			57.00
17		4.00			57.60		3.80			57.40		3.40			57.00
18		4.00			57.60		3.80			57.40		3.40			57.00
19		4.00			57.60		3.80			57.40		3.40			57.00
20		3.90			57.50		3.70			57.30		3.30			56.90
21		3.90			57.50		3.70			57.30		3.30			56.90
22		3.90			57.50		3.70			57.30		3.30			56.90
23		3.90			57.50		3.70			57.30		3.30			56.90
24		3.90			57.50		3.70			57.30		3.30			56.90
25		3.90			57.50		3.60			57.20		3.30			56.90
26		3.90			57.50		3.60			57.20		3.30			56.90
27		3.80			57.40		3.60			57.20		3.30			56.90
28		3.80			57.40		3.60			57.20		3.30			56.90
29		3.80			57.40							3.30			56.90
30		3.80			57.40							3.30			56.90
31		3.80			57.40							3.30			56.90

1911	APRIL				MAY				JUNE				
1		3.20		1056.80		3.50	3.50	1057.10		3.20	3.30	3.25	1056.85
2		3.20		56.80		3.30	3.40	3.35	56.95		3.90	3.40	3.65	57.25
3		3.20		56.80		3.30	3.40	3.35	56.95		3.70	3.30	3.50	57.10
4		3.20		56.80		3.30	3.30	3.30	56.90		3.70	3.40	3.55	57.15
5		3.20		56.80		3.30	3.00	3.15	56.75		3.50	3.00	3.25	56.85
6		3.20		56.80		3.20	3.20	3.20	56.80		3.10	3.40	3.25	56.85
7		3.20		56.80		3.20	3.20	3.20	56.80		3.40	3.70	3.55	57.15
8		3.20		56.80		3.20	3.20	3.20	56.80		4.00	3.60	3.80	57.40
9		3.20		56.80		3.30	3.40	3.35	56.95		3.50	3.60	3.55	57.15
10		3.20		56.80		3.20	3.50	3.35	56.95		3.60	3.50	3.55	57.15
11		3.20		56.80		3.30	3.10	3.20	56.80		3.40	3.90	3.65	57.25
12		3.20		56.80		3.20	3.20	3.20	56.80		3.70	3.70	3.70	57.30
13		3.20		56.80		3.20	3.20	3.20	56.80		3.70	3.60	3.65	57.25
14		3.20		56.80		3.50	3.50	3.50	57.10		3.60	3.60	3.60	57.20
15		3.20		56.80		3.50	3.50	3.50	57.10		3.50	3.70	3.60	57.20
16		3.30		56.90		3.50	3.50	3.50	57.10		3.70	3.70	3.70	57.30
17		3.30		56.90		3.30	3.30	3.30	56.90		3.70	3.70	3.70	57.30
18		3.30		56.90		3.40	3.40	3.40	57.00		3.70	3.70	3.70	57.30
19		3.30		56.90		3.30	3.30	3.30	56.90		3.70	3.60	3.65	57.25
20		3.30		56.90		3.30	3.30	3.30	56.90		3.50	3.50	3.50	57.10
21		3.30		56.90		3.30	3.40	3.35	56.95		3.60	3.60	3.60	57.20
22		3.30		56.90		3.40	3.40	3.40	57.00	1	3.80	4.20	4.00	57.60
23		3.30		56.90		3.40	3.40	3.40	57.00	1	4.00	4.00	4.00	57.60
24		3.30		56.90		3.40	3.40	3.40	57.00		3.70	3.80	3.75	57.35
25		3.30		56.90		3.30	3.50	3.40	57.00		3.70	3.60	3.65	57.25
26		3.30		56.90		3.90	3.70	3.80	57.40		3.70	3.60	3.65	57.25
27		3.30		56.90		3.00	2.70	2.85	56.45		3.80	3.80	3.80	57.40
28		3.30		56.90		2.40	3.20	2.80	56.40		3.60	3.80	3.70	57.30
29		3.30		56.90		3.30	3.40	3.35	56.95		3.70	3.60	3.65	57.25
30		3.60		57.20		3.50	3.40	3.45	57.05		3.60	3.60	3.60	57.20
31						3.30	3.30	3.30	56.90					

1. E. very strong (R. B.) (S.)

TABLE 8—Continued

WATER LEVELS—LAKE OF THE WOODS—*WARROAD, MINN.

RECORDS OF U. S. WAR DEPARTMENT

1911	July					August					September				
	Footnote	Gauge Height			Elevation, Sea-level Datum	Footnote	Gauge Height			Elevation, Sea-level Datum	Footnote	Gauge Height			Elevation, Sea-level Datum
		8 a.m.	7 p.m.	Mean			7 a.m.	7 p.m.	Mean			8 a.m.	7 p.m.	Mean	
1	...	3.50	3.60	3.55	1057.15	4	3.35	3.20	3.28	1056.88	...	3.00	3.10	3.05	1056.65
2	...	3.60	3.50	3.55	57.15	...	3.10	3.00	3.05	56.65	...	3.10	3.10	3.10	56.70
3	...	3.60	3.60	3.60	57.20	...	3.10	3.10	3.10	56.70	...	3.00	3.10	3.05	56.65
4	...	3.60	3.60	3.60	57.20	...	3.00	3.10	3.05	56.65	...	3.10	3.40	3.25	56.85
5	...	3.70	3.80	3.75	57.35	...	3.10	3.20	3.15	56.75	...	3.50	3.40	3.45	57.05
6	...	3.60	3.50	3.55	57.15	...	3.10	3.10	3.10	56.70	...	3.30	3.10	3.20	56.80
7	...	3.50	3.50	3.50	57.10	...	3.20	3.20	3.20	56.80	...	3.10	3.10	3.10	56.70
8	...	3.60	3.70	3.65	57.25	...	3.20	3.20	3.20	56.80	...	2.90	3.10	3.00	56.60
9	...	3.50	3.60	3.55	57.15	...	3.20	3.20	3.20	56.80	...	2.90	3.10	3.00	56.60
10	1	3.20	3.30	3.25	56.85	...	3.20	3.20	3.20	56.80	...	2.90	2.90	2.90	56.50
11	...	3.60	3.70	3.65	57.25	...	3.10	3.20	3.15	56.75	...	2.90	3.10	3.00	56.60
12	...	3.70	3.70	3.70	57.30	...	3.00	3.00	3.00	56.60	...	2.80	2.90	2.85	56.45
13	...	3.60	3.50	3.55	57.15	...	3.10	3.00	3.05	56.65	...	2.80	2.80	2.80	56.40
14	2	3.30	3.30	3.30	56.90	...	3.10	3.10	3.10	56.70	...	2.80	2.60	2.70	56.30
15	...	3.50	3.60	3.55	57.15	...	3.20	3.20	3.20	56.80	...	2.60	2.90	2.75	56.35
16	...	3.40	3.60	3.50	57.10	...	3.20	3.20	3.20	56.80	...	2.80	2.90	2.85	56.45
17	...	3.30	3.40	3.35	56.95	...	3.20	3.20	3.20	56.80	...	2.90	3.00	2.95	56.55
18	...	3.40	3.40	3.40	57.00	...	3.20	3.20	3.20	56.80	...	2.40	2.60	2.50	56.10
19	...	3.40	3.30	3.35	56.95	...	3.00	3.00	3.00	56.60	...	2.80	2.90	2.85	56.45
20	...	3.30	3.35	3.33	56.93	...	3.10	3.10	3.10	56.70	...	2.90	2.60	2.75	56.35
21	...	3.40	3.30	3.35	56.95	5	3.10	3.60	3.35	56.95	...	2.80	2.90	2.85	56.45
22	...	3.10	3.40	3.25	56.85	...	3.10	3.30	3.20	56.80	...	3.10	3.40	3.25	56.85
23	3	3.70	3.40	3.55	57.15	...	3.10	3.20	3.15	56.75	...	3.50	3.20	3.35	56.95
24	...	3.40	3.25	3.33	56.93	...	2.90	2.90	2.90	56.50	...	2.90	2.90	2.90	56.50
25	...	3.10	3.10	3.10	56.70	...	3.00	3.00	3.00	56.60	...	2.90	2.90	2.90	56.50
26	...	3.00	3.30	3.15	56.75	...	3.10	3.10	3.10	56.70	...	2.90	2.80	2.85	56.45
27	...	3.10	3.10	3.10	56.70	...	3.40	3.50	3.45	57.05	...	3.10	2.90	3.00	56.60
28	...	3.00	3.15	3.08	56.68	...	3.30	3.20	3.25	56.85	...	2.70	2.90	2.80	56.40
29	...	3.10	3.10	3.10	56.70	...	3.00	3.00	3.00	56.60	...	2.90	2.90	2.90	56.50
30	...	3.35	3.25	3.30	56.90	...	2.80	2.90	2.85	56.45	...	2.90	2.80	2.85	56.45
31	...	3.25	3.20	3.23	56.83	...	2.90	3.10	3.00	56.60	...	.....	.....	.....	.....

1911	October					November					December				
		6 p.m.				8 a.m.	5 p.m.								
1	...	2.90	3.00	2.95	1056.55	...	3.20	3.20	3.20	1056.80	...	3.60	.....	.....	.....
2	...	2.90	2.90	2.90	56.50	...	2.80	.....	.....	56.40	...	3.60	.....	.....	.....
3	...	2.90	2.90	2.90	56.50	...	2.40	.....	.....	56.06	...	3.60	.....	.....	.....
4	...	3.40	3.10	3.25	56.85	...	2.80	.....	.....	56.40	...	3.60	.....	.....	.....
5	...	2.90	2.90	2.90	56.50	...	2.80	.....	.....	56.40	...	3.60	.....	.....	.....
6	...	3.00	3.00	3.00	56.60	...	3.00	.....	.....	56.60	...	3.60	.....	.....	.....
7	...	2.90	3.00	2.95	56.55	...	3.40	.....	.....	57.00	...	3.60	.....	.....	.....
8	...	2.90	3.00	2.95	56.55	...	3.50	.....	.....	57.10	...	3.60	.....	.....	.....
9	...	2.90	2.90	2.90	56.50	8	3.40	.....	.....	57.00	...	3.60	.....	.....	.....
10	6	2.90	2.90	2.90	56.50	...	3.20	.....	.....	56.80	...	3.60	.....	.....	.....
11	...	2.90	2.90	2.90	56.50	...	3.40	.....	.....	57.00	...	3.60	.....	.....	.....
12	...	3.10	3.10	3.10	56.70	...	3.40	.....	.....	57.00	...	3.70	.....	.....	.....
13	...	3.00	3.10	3.05	56.65	...	3.30	.....	.....	56.90	...	3.70	.....	.....	.....
14	...	2.90	3.00	2.95	56.55	...	3.30	.....	.....	56.90	...	3.70	.....	.....	.....
15	...	3.00	3.00	3.00	56.60	...	3.30	.....	.....	56.90	...	3.70	.....	.....	.....
16	...	3.00	3.00	3.00	56.60	...	3.40	.....	.....	57.00	...	3.70	.....	.....	.....
17	...	3.00	2.90	2.95	56.55	...	3.40	.....	.....	57.00	...	3.70	.....	.....	.....
18	...	2.90	2.90	2.90	56.50	...	3.30	.....	.....	56.90	...	3.70	.....	.....	.....
19	...	3.00	3.00	3.00	56.60	...	3.30	.....	.....	56.90	...	3.70	.....	.....	.....
20	...	3.00	2.90	2.95	56.55	...	3.30	.....	.....	56.90	...	3.70	.....	.....	.....
21	...	3.00	2.90	2.95	56.55	...	3.30	.....	.....	56.90	...	3.70	.....	.....	.....
22	...	2.90	3.00	2.95	56.55	...	3.30	.....	.....	56.90	...	3.70	.....	.....	.....
23	...	3.10	3.00	3.05	56.65	...	3.30	.....	.....	56.90	...	3.70	.....	.....	.....
24	...	3.00	3.00	3.00	56.60	...	3.30	.....	.....	56.90	...	3.70	.....	.....	.....
25	...	3.00	2.90	2.95	56.55	...	3.30	.....	.....	56.90	...	3.70	.....	.....	.....
26	...	3.00	2.90	2.95	56.55	...	3.40	.....	.....	57.00	...	3.70	.....	.....	.....
27	7	3.00	3.00	3.00	56.60	...	3.40	.....	.....	57.00	...	3.70	.....	.....	.....
28	...	3.00	3.00	3.00	56.60	...	3.30	.....	.....	56.90	...	3.70	.....	.....	.....
29	...	3.00	2.80	2.90	56.50	...	3.30	.....	.....	56.90	...	3.70	.....	.....	.....
30	...	3.30	3.60	3.45	57.05	...	3.30	.....	.....	56.90	...	3.70	.....	.....	.....
31	...	3.20	3.10	3.15	56.75	...	.....	.....	.....	.....	...	3.70	.....	.....	.....

*From July 19, 1911, to July 23, 1912, the gauge heights are taken at Zippel 1. W. very strong (R. B.) (S.) 2. NW. strong (R. B.) (S.) 3. N. strong (R. B.) (S.) 4. N. very strong, gale (R. B.) 5. N. gale (R. B.) (S.) 6. Moved dredge from Zippel to Jacobs Landing (R. B.) 7. Ice one-half inch thick in upper Harbor (R. B.) (S.) 8. Bay froze over (R. B.)

NOTE.—Gauge heights from December 1, 1911, to April 27, 1912, are considered unreliable on account of instability of gauge and are not reduced to sea-level datum.—(Engrs.)

TABLE 8—Continued

WATER LEVELS—LAKE OF THE WOODS—ZIPPEL, MINN.

RECORDS OF U. S. WAR DEPARTMENT

1912	JANUARY					FEBRUARY					MARCH				
	Footnote	Gauge Height			Elevation, Sea-level Datum	Footnote	Gauge Height			Elevation, Sea-level Datum	Footnote	Gauge Height			Elevation, Sea-level Datum
		9 a.m.	7 p.m.	Mean			9 a.m.	7 p.m.	Mean			9 a.m.	7 p.m.	Mean	
1		3.70					3.80					2.80			
2		3.70					3.60					2.80			
3		3.70					3.60					2.80			
4		3.70					3.60					2.80			
5		3.70					3.60					2.80			
6		3.70					3.50					2.80			
7		3.70					3.60					2.80			
8		3.70					3.60					2.80			
9		3.70					3.60					2.80			
10		3.70					2.80					2.80			
11		3.70					2.80					2.80			
12		3.70					2.80					2.80			
13		3.70					2.80					2.70			
14		3.70					2.80					2.70			
15		3.70					2.80					2.70			
16		3.70					2.80					2.70			
17		3.70					2.80					2.70			
18		3.70					2.80					2.70			
19		3.70					2.80					2.70			
20		3.70					2.80					2.70			
21		3.70					2.80					2.70			
22		3.70					2.80					2.70			
23		3.70					2.80					2.70			
24		3.70					2.80					2.70			
25		3.70					2.80					2.70			
26		3.70					2.80					2.70			
27		3.70					2.80					2.70			
28		3.70					2.80					2.70			
29		3.70					2.80					2.70			
30		3.70										2.70			
31		3.70										2.70			

1912	APRIL					MAY					JUNE				
		8 a.m				6 a.m.					6 a.m.				
1		2.70				3.70	3.70	3.70	1057.75		4.50	4.50	4.50	1058.55	
2		2.70				3.80	3.80	3.80	57.85		4.60	4.50	4.55	58.60	
3		2.70				3.80	3.80	3.80	57.85		4.60	4.70	4.65	58.70	
4		2.70				3.90	3.90	3.90	57.95		4.50	4.60	4.55	58.60	
5		2.50				3.90	3.90	3.90	57.95		4.50	4.60	4.55	58.60	
6		2.50				3.90	3.90	3.90	57.95		4.80	4.70	4.75	58.80	
7		2.50				4.00	3.80	3.90	57.95		4.60	4.70	4.65	58.70	
8		2.50				4.00	4.00	4.00	58.05		4.70	4.70	4.70	58.75	
9		2.60				4.00	4.00	4.00	58.05		4.60	4.50	4.55	58.60	
10		2.60				4.00	4.30	4.15	58.20		4.50	4.70	4.60	58.65	
11		2.60				4.30	4.20	4.25	58.30		4.80	4.70	4.75	58.80	
12		2.70				4.20	4.40	4.30	58.35		4.70	4.70	4.70	58.75	
13		2.70				4.30	4.10	4.20	58.25		4.70	4.70	4.70	58.75	
14		2.70				4.00	4.20	4.10	58.15		4.70	4.70	4.70	58.75	
15		2.70				4.30	4.20	4.25	58.30	2	4.80	5.10	4.95	59.00	
16		2.70				4.20	4.10	4.15	58.20		4.90	4.80	4.85	58.90	
17		2.70				4.20	4.40	4.30	58.35		4.90	4.80	4.85	58.90	
18		2.80				4.40	4.20	4.30	58.35		4.70	4.70	4.70	58.75	
19		2.80				4.20	4.20	4.20	58.25		4.70	4.70	4.70	58.75	
20		2.80				4.30	4.20	4.25	58.30		4.80	4.70	4.75	58.80	
21		2.80				4.40	4.20	4.30	58.35		4.70	4.70	4.70	58.75	
22		2.80				4.40	4.30	4.35	58.40		4.60	4.60	4.60	58.65	
23		2.90				4.30	4.40	4.35	58.40		4.60	4.70	4.65	58.70	
24		2.80				4.40	4.30	4.35	58.40		4.60	4.70	4.65	58.70	
25		2.90				4.30	4.30	4.30	58.35		4.80	4.80	4.80	58.85	
26		2.90				4.40	4.40	4.40	58.45		4.70	4.70	4.70	58.75	
27	1	2.80				4.40	4.40	4.40	58.45		4.60	4.60	4.60	58.65	
28		3.60			57.65	5.00	4.60	4.80	58.85		4.60	4.70	4.65	58.70	
29		3.60			57.65	4.40	4.40	4.40	58.45		4.70	5.30	5.00	59.05	
30		3.60			57.65	4.50	4.40	4.45	58.50						
31						4.40	4.50	4.45	58.50						

1. Moved to Zippel (R. B.) (S.) 2. N. very strong (R. B.) (S.)

NOTE.—Gauge heights from December 1, 1911, to April 27, 1912, are considered unreliable on account of instability of gauge and are not reduced to sea-level datum.—(Engrs.)

TABLE 8—Continued

WATER LEVELS—LAKE OF THE WOODS—*WARROAD, MINN.

RECORDS OF U. S. WAR DEPARTMENT

1912	July					August					September				
	Footnote	Gauge Height			Elevation, Sea-level Datum	Footnote	Gauge Height			Elevation, Sea-level Datum	Footnote	Gauge Height			Elevation, Sea-level Datum
		6 a.m.	7 p.m.	Mean			7 a.m.	7 p.m.	Mean			7 a.m.	6 p.m.	Mean	
1	1	4.70	4.80	4.75	1058.80	...	4.80	4.80	4.80	1059.40	...	5.00	4.95	4.97	1059.57
2	...	4.60	4.80	4.70	58.75	...	4.80	4.90	4.85	59.45	...	5.00	5.00	5.00	59.60
3	...	4.70	4.80	4.75	58.80	...	4.80	4.80	4.80	59.40	...	5.00	4.90	4.95	59.55
4	...	4.90	4.90	4.90	58.95	...	4.80	4.80	4.80	59.40	...	5.25	5.05	5.15	59.75
5	...	4.70	4.80	4.75	58.80	...	4.70	4.80	4.75	59.35	...	5.25	5.10	5.17	59.77
6	...	4.80	4.90	4.85	58.90	...	4.80	4.80	4.80	59.40	3	4.90	4.55	4.73	59.33
7	...	4.90	5.10	5.00	59.05	...	4.80	5.10	4.95	59.55	...	5.05	5.00	5.03	59.63
8	...	4.80	5.00	4.90	58.95	...	4.90	5.00	4.95	59.55	...	5.30	5.30	5.30	59.90
9	...	5.10	5.00	5.05	59.10	...	5.00	5.00	5.00	59.60	...	5.10	5.20	5.15	59.75
10	...	5.00	5.00	5.00	59.05	...	5.00	5.00	5.00	59.60	...	5.20	5.15	5.17	59.77
11	...	4.80	5.00	4.90	58.95	...	4.90	5.00	4.95	59.55	...	5.00	5.00	5.00	59.60
12	...	4.90	5.10	5.00	59.05	...	4.80	4.70	4.75	59.35	...	5.10	5.10	5.10	59.70
13	...	5.00	5.00	5.00	59.05	...	4.60	4.80	4.70	59.30	...	5.25	5.30	5.27	59.87
14	...	4.70	5.30	5.00	59.05	...	5.00	5.00	5.00	59.60	...	5.30	5.60	5.45	60.05
15	...	5.20	5.00	5.10	59.15	...	4.90	5.00	4.95	59.55	...	5.65	5.45	5.55	60.15
16	...	4.70	4.90	4.80	58.85	...	5.00	5.00	5.00	59.60	...	5.35	5.35	5.35	59.95
17	...	5.00	5.10	5.05	59.10	...	5.20	5.00	5.10	59.70	...	5.40	5.30	5.35	59.95
18	...	5.10	5.10	5.10	59.15	...	5.00	5.00	5.00	59.60	...	5.25	5.35	5.30	59.90
19	...	4.70	4.90	4.80	58.85	...	4.90	5.05	4.97	59.57	...	5.35	5.35	5.35	59.95
20	...	4.90	5.10	5.00	59.05	...	4.95	4.85	4.90	59.50	...	5.70	5.40	5.55	60.15
21	...	5.00	5.00	5.00	59.05	...	4.70	4.85	4.77	59.37	...	5.60	5.40	5.50	60.10
22	...	5.00	5.10	5.05	59.10	...	4.85	4.90	4.87	59.47	...	5.30	5.25	5.27	59.87
23	2	4.70	4.60	4.65	59.25	...	4.90	5.00	4.95	59.55	...	5.50	5.85	5.67	60.27
24	...	4.40	4.40	4.40	59.00	...	5.05	5.00	5.02	59.62	4	6.30	6.30	6.30	60.90
25	...	4.70	4.80	4.75	59.35	...	5.00	5.25	5.12	59.72	...	6.10	6.05	6.07	60.67
26	...	4.70	4.70	4.70	59.30	...	5.05	5.00	5.02	59.62	...	5.60	5.70	5.65	60.25
27	...	4.90	4.70	4.80	59.40	...	4.90	5.05	4.97	59.57	...	5.70	5.65	5.67	60.27
28	...	4.70	4.70	4.70	59.30	...	5.05	5.05	5.05	59.65	...	5.75	5.80	5.77	60.37
29	...	4.70	4.70	4.70	59.30	...	5.00	5.05	5.02	59.62	...	5.70	5.40	5.55	60.15
30	...	4.90	5.20	5.05	59.65	...	5.00	5.00	5.00	59.60	...	5.80	5.90	5.85	60.45
31	...	4.70	4.90	4.80	59.40	...	5.00	5.00	5.00	59.60	...	.....	.....	.....	.....

1912	October					November					December				
		7 a.m.	5 p.m.					5 p.m.				8 a.m.			
1	...	5.80	5.90	5.85	1060.45	...	6.20	6.10	6.15	1060.75	...	6.10	.....	.....	1060.70
2	...	5.80	5.90	5.85	60.45	...	6.20	6.20	6.20	60.80	...	6.10	.....	.....	60.70
3	...	5.80	5.90	5.85	60.45	...	6.10	6.10	6.10	60.70	...	6.10	.....	.....	60.70
4	...	5.90	6.00	5.95	60.55	...	6.10	6.10	6.10	60.70	...	6.10	.....	.....	60.70
5	...	6.00	6.10	6.05	60.65	...	6.10	6.10	6.10	60.70	...	6.10	.....	.....	60.70
6	...	6.20	6.00	6.10	60.70	...	6.20	6.20	6.20	60.80	...	6.10	.....	.....	60.70
7	...	5.70	6.00	5.85	60.45	...	6.20	6.20	6.20	60.80	...	6.10	.....	.....	60.70
8	...	6.00	6.10	6.05	60.65	...	6.20	6.10	6.15	60.75	...	6.00	.....	.....	60.60
9	5	6.50	6.40	6.45	61.05	...	6.20	6.30	6.25	60.85	...	6.00	.....	.....	60.60
10	...	6.20	6.10	6.15	60.75	...	6.10	6.30	6.20	60.80	...	6.00	.....	.....	60.60
11	...	6.10	6.20	6.15	60.75	...	6.40	6.30	6.35	60.95	...	6.00	.....	.....	60.60
12	...	6.00	6.00	6.00	60.60	...	6.30	6.20	6.25	60.85	...	6.00	.....	.....	60.60
13	...	6.00	6.00	6.00	60.60	...	6.40	6.20	6.30	60.90	...	6.00	.....	.....	60.60
14	...	6.00	6.00	6.00	60.60	...	6.20	6.20	6.20	60.80	...	6.00	.....	.....	60.60
15	...	6.00	6.00	6.00	60.60	...	6.20	6.10	6.15	60.75	...	6.00	.....	.....	60.60
16	...	6.00	6.00	6.00	60.60	8	6.20	6.10	6.15	60.75	...	6.00	.....	.....	60.60
17	...	6.10	6.20	6.15	60.75	...	6.20	6.20	6.20	60.80	...	6.00	.....	.....	60.60
18	...	6.00	5.70	5.85	60.45	9	6.00	6.00	6.00	60.60	...	6.00	.....	.....	60.60
19	...	6.00	6.20	6.10	60.70	...	6.10	6.20	6.15	60.75	...	6.00	.....	.....	60.60
20	...	6.30	6.00	6.15	60.75	...	6.10	5.80	5.95	60.55	...	6.00	.....	.....	60.60
21	...	6.20	6.20	6.20	60.80	...	6.00	6.20	6.10	60.70	...	6.00	.....	.....	60.60
22	...	6.20	6.20	6.20	60.80	...	6.00	6.20	6.10	60.70	...	6.00	.....	.....	60.60
23	...	6.10	6.10	6.10	60.70	...	6.10	6.30	6.20	60.80	...	6.00	.....	.....	60.60
24	...	6.00	6.10	6.05	60.65	10	6.00	6.20	6.10	60.70	...	6.00	.....	.....	60.60
25	...	6.00	6.00	6.00	60.60	...	6.10	6.20	6.15	60.75	...	6.00	.....	.....	60.60
26	...	6.20	6.20	6.20	60.80	...	6.20	6.20	6.20	60.80	...	6.00	.....	.....	60.60
27	...	6.00	6.10	6.05	60.65	...	6.20	6.10	6.15	60.75	...	6.00	.....	.....	60.60
28	6	6.30	7.20	6.75	61.35	...	5.90	5.90	5.90	60.50	...	6.00	.....	.....	60.60
29	7	6.70	6.30	6.50	61.10	...	6.10	6.10	6.10	60.70	...	6.00	.....	.....	60.60
30	...	6.10	6.10	6.10	60.70	11	6.20	.....	.....	60.80	...	6.00	.....	.....	60.60
31	...	6.10	6.30	6.20	60.80	...	.....	.....	.....	.....	...	6.00	.....	.....	60.60

* To July 23, 1912, at Zippel 1. Gauge at Zippel (R. B.) (S.) 2. Warroad (R. B.) 3. W. (R. B.) (S.) 4. NE. strong (R. B.) (S.) 5. N. strong (R. B.) (S.) 6. NE. strong (R. B.) (S.) 7. NE. strong (R. B.)(S.) 8. Ice formed over bay to end of channel (R. B.) 9. W. strong, bay clear of ice (R. B.) (S.) 10. Bay froze over (R. B.) (S.) 11. Snow about all gone, ice about 3 inches thick. Lake froze over as far as one can see (R. B.)

TABLE 8—Continued

WATER LEVELS—LAKE OF THE WOODS—WARROAD, MINN.

RECORDS OF U. S. WAR DEPARTMENT

1913	JANUARY					FEBRUARY					MARCH				
	Footnote	Gauge Height			Elevation, Sea-level Datum	Footnote	Gauge Height			Elevation, Sea-level Datum	Footnote	Gauge Height			Elevation, Sea-level Datum
		8 a.m.	6 p.m.	Mean			8 a.m.	6 p.m.	Mean			8 a.m.	6 p.m.	Mean	
1		6.00			1060.60		5.90			1060.50		5.85			1060.45
2		6.00			60.60		5.90			60.50		5.85			60.45
3		6.00			60.60		5.80			60.40		5.85			60.45
4		6.00			60.60		5.80			60.40		5.85			60.45
5		5.90			60.50		5.80			60.40		5.85			60.45
6		5.90			60.50		5.80			60.40		5.85			60.45
7		5.90			60.50		5.80			60.40		5.85			60.45
8		5.90			60.50		5.80			60.40		5.85			60.45
9		5.90			60.50		5.80			60.40		5.85			60.45
10		5.90			60.50		5.80			60.40		5.85			60.45
11		5.90			60.50		5.80			60.40		5.85			60.45
12		5.90			60.50		5.80			60.40		5.85			60.45
13		5.90			60.50		5.80			60.40		5.90			60.50
14		5.90			60.50		5.80			60.40		5.90			60.50
15		5.90			60.50		5.80			60.40		5.85			60.45
16		5.90			60.50		5.80			60.40		5.85			60.45
17		5.90			60.50		5.80			60.40		5.90			60.50
18		5.90			60.50		5.80			60.40		5.90			60.50
19		5.90			60.50		5.80			60.40		5.90			60.50
20		5.90			60.50		5.80			60.40		5.90			60.50
21		5.90			60.50		5.80			60.40		5.90			60.50
22		5.90			60.50		5.80			60.40		5.90			60.50
23		5.90			60.50		5.80			60.40		5.90			60.50
24		5.90			60.50		5.80			60.40		5.90			60.50
25		5.90			60.50		5.80			60.40		5.90			60.50
26		5.90			60.50		5.80			60.40		5.90			60.50
27		5.90			60.50		5.80			60.40		5.90			60.50
28		5.90			60.50		5.80			60.40		5.90			60.50
29		5.90			60.50							5.90			60.50
30		5.90			60.50							5.90			60.50
31		5.90			60.50							5.90			60.50

1913	APRIL					MAY					JUNE				
						7 a.m.					7 a.m.				
1		5.95			1060.55	6.40	6.50	6.45	1061.05		6.60	6.50	6.55	1061.15
2		5.95			60.55	6.50	6.50	6.50	61.10		6.50	6.50	6.50	61.10
3		5.95			60.55	6.60	6.50	6.55	61.15		6.60	6.50	6.55	61.15
4		5.95			60.55	6.50	6.55	6.53	61.13		6.40	6.50	6.45	61.05
5		6.00			60.60	6.50	6.50	6.50	61.10		6.50	6.60	6.55	61.15
6		6.00			60.60	6.50	6.60	6.55	61.15	5	7.00	6.70	6.85	61.45
7		6.00			60.60	6.55	6.55	6.55	61.15		6.60	6.60	6.60	61.20
8		6.00			60.60	6.70	6.60	6.65	61.25		6.60	6.60	6.60	61.20
9		6.05			60.65	6.60	6.60	6.60	61.20		6.60	6.50	6.55	61.15
10		6.05			60.65	6.60	6.50	6.55	61.15		6.40	6.40	6.40	61.00
11		6.05			60.65	6.50	6.50	6.50	61.10		6.40	6.40	6.40	61.00
12	1	6.05			60.65	6.50	6.60	6.55	61.15		6.40	6.50	6.45	61.05
13		6.05			60.65	6.70	6.70	6.70	61.30		6.50	6.50	6.50	61.10
14		6.10			60.70	6.60	6.60	6.60	61.20		6.50	6.50	6.50	61.10
15	2	6.10			60.70	6.60	6.60	6.60	61.20	6	6.50	6.40	6.45	61.05
16		6.10			60.70	6.60	6.60	6.60	61.20		6.50	6.50	6.50	61.10
17		6.10			60.70	6.60	6.70	6.65	61.25		6.60	6.50	6.55	61.15
18		6.20			60.80	6.70	6.60	6.65	61.25		6.60	6.50	6.55	61.15
19		6.30			60.90	6.60	6.60	6.60	61.20		6.40	6.40	6.40	61.00
20		6.30			60.90	6.60	6.70	6.65	61.25		6.40	6.50	6.45	61.05
21		6.30			60.90	6.70	6.70	6.70	61.30		6.40	6.40	6.40	61.00
22		6.40			61.00	6.60	6.60	6.60	61.20		6.30	6.30	6.30	60.90
23		6.40			61.00	6.50	6.60	6.55	61.15		5.80	6.30	6.05	60.65
24		6.40			61.00	6.80	6.60	6.70	61.30		6.20	6.20	6.20	60.80
25		6.40			61.00	6.50	6.60	6.55	61.15		6.20	6.15	6.17	60.77
26		6.45			61.05	6.50	6.50	6.50	61.10		6.30	6.50	6.40	61.00
27		6.50			61.10	6.60	6.60	6.60	61.20	7	6.70	6.70	6.70	61.30
28		6.50			61.10	6.60	6.60	6.60	61.20		6.20	6.30	6.25	60.85
29		6.50			61.10	6.60	6.70	6.65	61.25		6.10	5.90	6.00	60.60
30		6.50			61.10	6.60	6.50	6.55	61.15	8	6.50	5.80	6.15	60.75
31						6.50	6.40	6.45	61.05					

1. River to bridge clear of ice (R. B.) (S.)
2. River open to lake (R. B.) (S.)
3. Lake clear of ice (R. B.) (S.)
4. Dredge from Warroad to Zippel (R. B.) (S.)
5. N. high wind all day (R. B.)
6. From Zippel to Warroad (S.)
7. E. very strong (R. B.) (S.)
8. W. very strong (R. B.) (S.)

TABLE 8—Continued

WATER LEVELS—LAKE OF THE WOODS—WARROAD, MINN.

RECORDS OF U. S. WAR DEPARTMENT

1913	JULY					AUGUST					SEPTEMBER				
	Footnote	Gauge Height			Elevation, Sea-level Datum	Footnote	Gauge Height			Elevation, Sea-level Datum	Footnote	Gauge Height			Elevation, Sea-level Datum
		7 a.m.	6 p.m.	Mean			7 a.m.	6 p.m.	Mean			7 a.m.	6 p.m.	Mean	
1	...	6.30	6.30	6.30	1060.90	...	6.30	6.32	6.32	1060.92	...	5.90	6.00	5.95	1060.55
2	...	6.20	6.20	6.20	60.80	...	6.30	6.45	6.37	60.97	...	6.05	6.10	6.07	60.67
3	...	5.90	6.00	5.95	60.55	...	6.40	6.40	6.40	61.00	2	6.30	6.10	6.20	60.80
4	1	6.30	6.40	6.35	60.95	...	6.35	6.40	6.37	60.97	...	5.95	6.00	5.97	60.57
5	...	6.20	6.20	6.20	60.80	...	6.50	6.60	6.55	61.15	...	6.00	6.00	6.00	60.60
6	...	6.30	6.30	6.30	60.90	...	6.40	6.40	6.40	61.00	...	6.00	6.00	6.00	60.60
7	...	6.30	6.20	6.25	60.85	...	6.35	6.25	6.30	60.90	...	5.97	6.00	5.99	60.59
8	...	6.00	5.40	5.70	60.30	...	6.20	6.10	6.15	60.75	...	5.92	5.95	5.94	60.54
9	...	6.30	6.20	6.25	60.85	...	6.30	6.70	6.50	61.10	3	5.85	5.50	5.67	60.27
10	...	6.20	6.20	6.20	60.80	...	6.60	6.50	6.55	61.15	...	5.80	5.85	5.83	60.43
11	...	6.00	6.40	6.20	60.80	...	6.30	6.30	6.30	60.90	...	5.80	5.70	5.75	60.35
12	...	6.20	6.50	6.35	60.95	...	6.10	6.30	6.20	60.80	...	5.80	5.90	5.85	60.45
13	...	6.35	6.35	6.35	60.95	...	6.20	6.30	6.25	60.85	...	5.90	6.00	5.95	60.55
14	...	6.40	6.50	6.45	61.05	...	6.25	6.25	6.25	60.85	...	5.80	5.60	5.70	60.30
15	...	6.40	6.40	6.40	61.00	...	7.00	6.30	6.65	61.25	...	5.70	5.70	5.70	60.30
16	...	6.30	6.40	6.35	60.95	...	6.30	6.35	6.32	60.92	...	5.80	5.70	5.75	60.35
17	...	6.40	6.30	6.35	60.95	...	6.45	6.35	6.40	61.00	...	5.70	5.70	5.70	60.30
18	...	6.30	6.20	6.25	60.85	...	6.50	6.40	6.45	61.05	...	5.50	5.70	5.60	60.20
19	...	6.40	6.60	6.50	61.10	...	6.35	6.40	6.37	60.97	4	5.30	5.80	5.55	60.15
20	...	6.60	6.50	6.55	61.15	...	6.10	6.25	6.17	60.77	...	5.80	5.80	5.80	60.40
21	...	6.40	6.60	6.50	61.10	...	6.40	6.00	6.20	60.80	...	6.00	5.70	5.85	60.45
22	...	6.50	6.45	6.48	61.08	...	6.30	6.20	6.25	60.85	...	5.60	5.60	5.60	60.20
23	...	6.65	6.55	6.60	61.20	...	6.10	6.37	6.23	60.83	...	5.55	5.60	5.57	60.17
24	...	6.50	6.40	6.45	61.05	...	6.20	6.20	6.20	60.80	...	5.50	5.60	5.55	60.15
25	...	6.30	6.30	6.30	60.90	...	5.95	6.00	5.97	60.57	...	5.50	5.40	5.45	60.05
26	...	6.50	6.50	6.50	61.10	...	6.00	6.20	6.10	60.70	...	5.40	5.50	5.45	60.05
27	...	6.45	6.50	6.47	61.07	...	6.10	6.20	6.15	60.75	...	5.30	5.30	5.30	59.90
28	...	6.50	6.40	6.45	61.05	...	5.80	6.00	5.90	60.50	...	5.30	5.40	5.35	59.95
29	...	6.50	6.50	6.50	61.10	...	6.10	6.10	6.10	60.70	...	5.60	5.60	5.60	60.20
30	...	6.40	6.40	6.40	61.00	...	5.95	6.10	6.03	60.63	...	5.35	5.40	5.37	59.97
31	...	6.25	6.30	6.27	60.87	...	6.40	.....	6.40	61.00	.....	.....	.....	.....	.....

1913	OCTOBER					NOVEMBER					DECEMBER				
						8 a.m.	*5 p.m.*				*8 a.m.*	*4 p.m.*			
1	...	5.40	5.40	5.40	1060.00	...	5.50	5.50	5.50	1060.10	...	5.50	5.50	5.50	1060.10
2	...	5.40	5.40	5.40	60.00	...	5.60	5.50	5.55	60.15	...	5.50	5.50	5.50	60.10
3	...	5.40	5.60	5.50	60.10	...	5.20	5.60	5.40	60.00	...	5.40	5.40	5.40	60.00
4	...	5.60	6.00	5.80	60.40	...	5.30	5.40	5.35	59.95	...	5.30	5.40	5.35	59.95
5	5	6.10	5.70	5.90	60.50	11	5.30	5.60	5.45	60.05	...	5.50	5.50	5.50	60.10
6	...	5.60	5.60	5.60	60.20	...	5.50	5.60	5.55	60.15	...	5.50	5.60	5.55	60.15
7	...	5.00	5.10	5.05	59.65	12	6.30	5.90	6.10	60.70	15	5.50	5.60	5.55	60.15
8	...	5.60	5.60	5.60	60.20	...	5.60	5.60	5.60	60.20	...	5.30	5.30	5.30	59.90
9	...	5.60	5.90	5.75	60.35	13	5.90	5.80	5.85	60.45	...	5.50	5.50	5.50	60.10
10	...	5.30	5.40	5.35	59.95	...	5.70	5.60	5.65	60.25	...	5.60	5.60	5.60	60.20
11	6	5.20	4.90	5.05	59.65	...	5.50	5.50	5.50	60.10	...	5.50	5.50	5.50	60.10
12	...	5.50	5.50	5.50	60.10	...	5.50	5.50	5.50	60.10	...	5.60	5.60	5.60	60.20
13	...	5.60	5.50	5.55	60.15	...	5.30	5.30	5.30	59.90	...	5.50	5.50	5.50	60.10
14	...	5.50	5.40	5.45	60.05	...	5.50	5.50	5.50	60.10	...	5.50	5.50	5.50	60.10
15	...	5.50	5.50	5.50	60.10	...	5.40	5.50	5.45	60.05	...	5.60	5.60	5.60	60.20
16	...	5.60	5.70	5.65	60.25	...	5.30	5.50	5.40	60.00	...	5.60	5.50	5.55	60.15
17	...	5.60	5.50	5.55	60.15	...	5.50	5.50	5.50	60.10	...	5.50	5.50	5.50	60.10
18	...	5.50	5.60	5.55	60.15	...	5.50	5.70	5.60	60.20	16	5.50	5.50	5.50	60.10
19	...	5.70	5.70	5.70	60.30	...	5.40	5.30	5.35	59.95	...	5.50	5.50	5.50	60.10
20	7	5.80	5.80	5.80	60.40	...	5.60	5.60	5.60	60.20	...	5.50	5.50	5.50	60.10
21	8	5.60	5.50	5.55	60.15	...	5.60	5.30	5.45	60.05	...	5.50	5.50	5.50	60.10
22	...	5.40	5.50	5.45	60.05	...	5.60	5.50	5.55	60.15	...	5.60	5.60	5.60	60.20
23	...	5.50	5.60	5.55	60.15	...	5.20	5.20	5.20	59.80	...	5.60	5.50	5.55	60.15
24	...	5.70	5.60	5.65	60.25	...	5.50	5.60	5.55	60.15	...	5.50	5.50	5.50	60.10
25	9	5.60	5.70	5.65	60.25	...	5.50	5.70	5.60	60.20	...	5.50	5.50	5.50	60.10
26	...	5.50	5.50	5.50	60.10	...	5.70	5.70	5.70	60.30	...	5.50	5.50	5.50	60.10
27	...	5.60	5.50	5.55	60.15	...	5.50	5.50	5.50	60.10	...	5.50	5.50	5.50	60.10
28	10	6.00	5.80	5.90	60.50	...	5.60	5.60	5.60	60.20	...	5.50	5.50	5.50	60.10
29	...	5.70	5.60	5.65	60.25	...	5.50	5.40	5.45	60.05	...	5.50	5.50	5.50	60.10
30	...	5.50	5.60	5.55	60.15	14	5.60	5.60	5.60	60.20	...	5.50	5.50	5.50	60.10
31	...	5.20	5.20	5.20	59.80	.....	.....	.....	.....	.....	...	5.50	5.50	5.50	60.10

1. N. strong, gauge 6.9 after storm, 8.30 p. m. (R. B.) 2. E. very strong (R. B.) (S.) 3. S. very strong (R. B.) (S.) 4. W. very strong (R. B.) (S.) 5. NE. very strong (R. B.) (S.) 6. W. very strong (R. B. (S.) 7. River froze over one-half to three-fourths inch thick (S.) 8. River froze over one-half to three fourths inch thick (R. B.) 9. River clear of ice (R. B.) 10. N. strong, river froze over; is at present 1½ to 2 inches of ice (S.) 11. Ice out of river (R. B.) (S.) 12. N. very strong (R. B.) (S.) 13. N. very strong river froze over (R. B.) (S.) 14. Channel almost clear of ice (R. B.) (S.) 15. Channel froze over (R. B.) (S.) 16. Lake froze over (R. B.) (S.)

TABLE 8—Continued

WATER LEVELS—LAKE OF THE WOODS—WARROAD, MINN.

RECORDS OF U. S. WAR DEPARTMENT

1914	JANUARY					FEBRUARY					MARCH				
	Footnote	Gauge Height			Elevation, Sea-level Datum	Footnote	Gauge Height			Elevation, Sea-level Datum	Footnote	Gauge Height			Elevation, Sea-level Datum
		8 a.m.	6 p.m.	Mean			9 a.m.	6 p.m.	Mean			8 a.m.	6 p.m.	Mean	
1		5.50			1060.10		5.50			1060.10		5.50			1060.10
2		5.50			60.10		5.50			60.10		5.50			60.10
3		5.50			60.10		5.50			60.10		5.50			60.10
4		5.50			60.10		5.50			60.10		5.50			60.10
5		5.50			60.10		5.50			60.10		5.50			60.10
6		5.50			60.10		5.50			60.10		5.50			60.10
7		5.60			60.20		5.50			60.10		5.50			60.10
8		5.50			60.10		5.50			60.10		5.50			60.10
9		5.50			60.10		5.50			60.10		5.50			60.10
10		5.50			60.10		5.50			60.10		5.50			60.10
11		5.50			60.10		5.50			60.10		5.50			60.10
12		5.50			60.10		5.50			60.10		5.50			60.10
13		5.50			60.10		5.50			60.10		5.50			60.10
14		5.50			60.10		5.50			60.10		5.50			60.10
15		5.50			60.10		5.50			60.10		5.40			60.00
16		5.50			60.10		5.50			60.10		5.40			60.00
17		5.50			60.10		5.50			60.10		5.40			60.00
18		5.50			60.10		5.50			60.10		5.40			60.00
19		5.50			60.10		5.50			60.10		5.45			60.05
20		5.50			60.10		5.50			60.10		5.45			60.05
21		5.50			60.10		5.50			60.10		5.40			60.00
22		5.50			60.10		5.50			60.10		5.40			60.00
23		5.50			60.10		5.55			60.15		5.40			60.00
24		5.50			60.10		5.55			60.15		5.40			60.00
25		5.50			60.10		5.55			60.15		5.40			60.00
26		5.50			60.10		5.50			60.10		5.40			60.00
27		5.50			60.10		5.50			60.10		5.40			60.00
28		5.50			60.10		5.50			60.10		5.40			60.00
29		5.50			60.10							5.40			60.00
30		5.50			60.10							5.40			60.00
31		5.50			60.10							5.40			60.00

1914	APRIL					MAY					JUNE				
						7 a.m.					7 a.m.				
1		6.40			1060.01	6.65	6.65	6.65	1060.26		7.40	7.50	7.45	1061.06	
2		6.40			60.01	6.65	6.70	6.67	60.28		7.40	7.30	7.35	60.96	
3		6.40			60.01	6.80	6.78	6.79	60.40		7.40	8.00	7.70	61.31	
4		6.41			60.02	6.80	6.80	6.80	60.41		8.20	7.80	8.00	61.61	
5		6.41			60.02	6.90	6.78	6.84	60.45		7.60	7.50	7.55	61.16	
6		6.40			60.01	6.94	7.02	6.98	60.59		7.40	7.50	7.45	61.06	
7		6.40			60.01	6.92	6.95	6.93	60.54		7.40	7.55	7.48	61.09	
8		6.40			60.01	6.92	6.90	6.91	60.52		7.50	7.60	7.55	61.16	
9		6.40			60.01	6.95	7.05	7.00	60.61		7.60	7.60	7.60	61.21	
10		6.35			59.96	7.22	7.50	7.36	60.97		7.55	7.70	7.63	61.24	
11		6.38			59.99	7.10	7.10	7.10	60.71		7.70	7.93	7.82	61.43	
12		6.35			59.96	7.00	7.30	7.15	60.76		7.80	7.94	7.87	61.48	
13		6.40			60.01	7.00	7.80	7.40	61.01		7.93	7.95	7.94	61.55	
14	1	6.34			59.95	7.15	7.50	7.32	60.93		7.85	8.04	7.94	61.55	
15		6.34			59.95	7.50	7.00	7.25	60.86		7.95	7.85	7.90	61.51	
16	2	6.40			60.01	7.20	7.00	7.10	60.71		7.80	7.70	7.75	61.36	
17		6.40			60.01	6.80	6.90	6.85	60.46		7.75	7.80	7.77	61.38	
18		6.45			60.06	6.93	7.20	7.06	60.67		8.40	8.02	8.21	61.82	
19		6.60			60.21	7.10	7.30	7.20	60.81		7.95	7.80	7.87	61.48	
20		6.52			60.13	7.20	7.20	7.20	60.81		7.60	7.85	7.73	61.34	
21		6.48			60.09	7.23	7.30	7.26	60.87		8.00	7.84	7.92	61.53	
22		6.52			60.13	7.30	7.30	7.30	60.91		7.70	7.75	7.73	61.34	
23		6.57			60.18	7.30	7.35	7.33	60.94		7.45	7.78	7.62	61.23	
24		6.60			60.21	7.25	7.30	7.27	60.88		7.50	7.81	7.65	61.26	
25		6.60			60.21	7.50	7.40	7.45	61.06		7.82	7.80	7.81	61.42	
26		6.62			60.23	7.20	7.20	7.20	60.81		7.90	8.10	8.00	61.61	
27	3	6.60			60.21	7.35	7.40	7.37	60.98		9.20	7.80	8.50	62.11	
28		6.70			60.31	7.40	7.50	7.45	61.06		7.78	7.80	7.79	61.40	
29		6.62			60.23	7.40	7.30	7.35	60.96		7.65	7.70	7.67	61.28	
30		6.68			60.29	7.40	7.20	7.30	60.91		7.68	7.58	7.63	61.24	
31						7.45	7.50	7.47	61.08						

1. Thawed through in places in channel (R. B.) (S.)
2. Channel open at R. R. Bridge (S.)
3. River and bay clear of ice (R. B.) (S.)
4. Lake clear of ice (R. B.) (S.)
5. W. Gale—Gale most all day (R. B.) (S.)

* TABLE 8—Continued

WATER LEVELS—LAKE OF THE WOODS—WARROAD, MINN.

RECORDS OF U. S. WAR DEPARTMENT

1914	JULY					AUGUST					SEPTEMBER				
	Footnote	Gauge Height			Elevation, Sea-level Datum	Footnote	Gauge Height			Elevation, Sea-level Datum	Footnote	Gauge Height			Elevation, Sea-level Datum
		7 a.m.	6 p.m.	Mean			7 a.m.	6 p.m.	Mean			7 a.m.	6 p.m.	Mean	
1	...	7.75	7.70	7.73	1061.34	...	7.46	7.50	7.48	1061.09	...	6.75	6.80	6.77	1060.38
2	...	7.60	7.60	7.60	61.21	...	7.54	7.45	7.49	61.10	3	6.55	6.65	6.60	60.21
3	...	7.65	7.65	7.65	61.26	...	7.00	7.46	7.23	60.84	...	6.55	6.80	6.68	60.29
4	...	7.65	7.75	7.70	61.31	...	7.30	7.10	7.20	60.81	...	6.80	6.83	6.81	60.42
5	...	7.62	7.60	7.61	61.22	...	7.42	7.15	7.28	60.89	4	7.00	7.15	7.07	60.68
6	...	7.45	7.48	7.46	61.07	...	7.20	7.30	7.25	60.86	...	6.90	6.90	6.90	60.51
7	...	7.70	7.65	7.67	61.28	...	7.40	7.30	7.35	60.96	...	6.82	6.89	6.86	60.47
8	...	7.50	7.38	7.44	61.05	...	7.12	7.40	7.26	60.87	...	6.80	6.95	6.87	60.48
9	...	7.45	7.55	7.50	61.11	...	7.15	7.12	7.14	60.75	...	6.78	6.60	6.69	60.30
10	...	7.75	7.66	7.71	61.32	...	7.40	7.25	7.33	60.94	...	6.55	6.78	6.66	60.27
11	...	7.65	7.95	7.80	61.41	...	7.12	7.10	7.11	60.72	...	6.75	6.80	6.78	60.39
12	...	7.70	8.00	7.85	61.46	...	7.00	7.00	7.00	60.61	...	6.75	6.60	6.67	60.28
13	...	7.80	7.70	7.75	61.36	...	7.05	7.15	7.10	60.71	...	6.80	6.60	6.70	60.31
14	...	7.68	7.64	7.66	61.27	...	6.98	7.10	7.04	60.65	...	6.78	6.75	6.76	60.37
15	...	7.55	7.65	7.60	61.21	...	7.05	7.20	7.13	60.74	...	6.65	6.68	6.67	60.28
16	...	7.35	7.30	7.33	60.94	...	7.00	7.05	7.02	60.63	...	6.80	6.95	6.87	60.48
17	...	7.68	7.70	7.69	61.30	...	7.10	6.96	7.03	60.64	...	6.90	6.90	6.90	60.51
18	...	7.50	7.70	7.60	61.21	...	7.00	7.00	7.00	60.61	...	7.02	7.01	7.01	60.62
19	...	7.60	7.67	7.63	61.24	...	7.00	7.05	7.02	60.63	...	6.80	6.83	6.81	60.42
20	...	7.52	7.75	7.63	61.24	...	6.92	6.92	6.92	60.53	...	6.85	6.80	6.84	60.45
21	...	7.65	7.55	7.60	61.21	...	6.95	7.00	6.97	60.58	...	6.90	6.95	6.93	60.54
22	...	7.69	7.67	7.68	61.29	1	7.00	†7.00	6.85	60.46	...	6.95	6.93	6.94	60.55
23	...	7.55	7.52	7.54	61.15	2	7.30	7.10	7.20	60.81	...	6.92	6.86	6.89	60.50
24	...	7.69	7.47	7.58	61.19	2	6.90	6.90	6.90	60.51	...	7.00	6.98	6.99	60.60
25	...	7.53	7.60	7.56	61.17	2	7.65	‡7.35	7.42	61.03	...	6.93	6.90	6.91	60.52
26	...	7.54	7.60	7.57	61.18	2	7.00	6.90	6.95	60.56	...	6.93	7.05	6.99	60.60
27	...	7.55	7.78	7.66	61.27	2	6.90	6.90	6.90	60.51	...	7.12	6.92	7.02	60.63
28	...	7.70	7.62	7.66	61.27	2	6.85	6.65	6.75	60.36	...	6.89	6.92	6.91	60.52
29	...	7.49	7.55	7.52	61.13	2	6.60	6.80	6.70	60.31	...	6.90	6.90	6.90	60.51
30	...	7.61	7.61	7.61	61.22	2	6.80	6.83	6.81	60.42	...	6.80	6.90	6.85	60.46
31	...	7.56	7.55	7.56	61.17	2	6.75	6.86	6.80	60.41	...	.....	.....	.....	.....

1914	OCTOBER					NOVEMBER					DECEMBER			
						8 a.m.	4.30pm				8 a.m.			
1	...	6.87	6.72	6.80	1060.41	...	7.20	7.20	7.20	1060.78	...	7.00	.....	.....	1060.58
2	...	6.77	6.90	6.84	60.45	...	7.30	7.03	7.17	60.75	...	7.20	.....	.....	60.78
3	...	6.88	6.92	6.90	60.51	...	6.95	7.00	6.98	60.56	...	7.30	.....	.....	60.88
4	...	6.90	6.86	6.88	60.49	...	6.80	7.00	6.90	60.48	...	7.30	.....	.....	60.88
5	...	6.88	6.90	6.89	60.50	...	7.28	7.25	7.27	60.85	...	7.28	.....	.....	60.86
6	...	6.90	7.00	6.95	60.56	...	7.20	7.25	7.23	60.81	...	7.30	.....	.....	60.88
7	...	7.02	6.93	6.98	60.59	...	6.90	7.00	6.95	60.53	9	7.30	.....	.....	60.88
8	...	6.94	6.87	6.91	60.52	...	7.00	7.00	7.00	60.58	...	7.32	.....	.....	60.90
9	...	6.90	7.00	6.95	60.56	...	7.25	7.20	7.23	60.81	...	7.30	.....	.....	60.88
10	...	7.00	6.80	6.90	60.51	...	7.00	7.04	7.02	60.60	...	7.31	.....	.....	60.89
11	...	6.70	7.20	6.95	60.56	...	7.25	7.30	7.28	60.86	...	7.26	.....	.....	60.84
12	...	7.28	7.18	7.23	60.84	...	7.30	7.30	7.30	60.88	...	7.20	.....	.....	60.78
13	...	7.14	7.04	7.09	60.67	...	7.05	7.20	7.13	60.71	...	7.20	.....	.....	60.78
14	...	6.80	6.70	6.75	60.33	6	7.45	7.30	7.38	60.96	...	7.24	.....	.....	60.82
15	...	6.90	7.10	7.00	60.58	...	7.00	7.30	7.15	60.73	...	7.23	.....	.....	60.81
16	...	6.94	7.00	6.97	60.55	...	7.00	6.80	6.90	60.48	...	7.23	.....	.....	60.81
17	...	7.12	7.10	7.11	60.69	...	7.00	7.00	7.00	60.58	...	7.24	.....	.....	60.82
18	...	7.00	7.10	7.05	60.63	7	7.10	7.22	7.16	60.74	...	7.23	.....	.....	60.81
19	...	7.00	7.06	7.03	60.61	...	7.22	7.21	7.22	60.80	...	7.22	.....	.....	60.80
20	...	7.05	7.00	7.03	60.61	...	7.17	7.17	7.17	60.75	...	7.25	.....	.....	60.83
21	...	7.15	7.25	7.20	60.78	...	7.10	7.15	7.13	60.71	...	7.25	.....	.....	60.83
22	...	7.15	7.00	7.08	60.66	...	7.20	7.20	7.20	60.78	...	7.22	.....	.....	60.80
23	...	7.20	7.30	7.25	60.83	...	7.26	7.24	7.25	60.83	...	7.22	.....	.....	60.80
24	...	7.13	6.80	6.97	60.55	...	7.20	7.20	7.20	60.78	...	7.25	.....	.....	60.83
25	...	7.20	7.15	7.18	60.76	8	7.20	7.12	7.16	60.74	...	7.23	.....	.....	60.81
26	...	7.35	7.05	7.20	60.78	...	7.25	7.35	7.30	60.88	...	7.27	.....	.....	60.85
27	5	6.80	6.70	6.75	60.33	...	7.20	7.26	7.23	60.81	...	7.27	.....	.....	60.85
28	...	7.10	7.10	7.10	60.68	...	7.25	7.20	7.23	60.81	...	7.28	.....	.....	60.86
29	...	7.10	7.12	7.11	60.69	...	7.21	7.20	7.21	60.79	...	7.22	.....	.....	60.80
30	...	7.12	7.11	7.12	60.70	...	7.25	7.22	7.23	60.81	...	7.23	.....	.....	60.81
31	...	7.00	7.10	7.05	60.63	...	.....	.....	.....	.....	...	7.28	.....	.....	60.86

* For 1915 records see page 297. † 12 m., 6.55 ‡ 12 m., 7.25 1. Very strong current to lake at 12 m.; light south wind all day—must have been a storm on lake somewhere (R. B.) 2. No records on original gauge-readers' sheets (Engrs.) 3. NW. very strong (R. B.) (S.) 4. E. strong (R. B.) (S.) 5. SW. strong (R. B.) 6. Bay froze over (R. B.) 7. Lake froze over as far as one can see (R. B.). 8 Thawed all day, lake open (R. B.) 9. Lake frozen over (R. B.)

TABLE 9

WATER LEVELS—LAKE OF THE WOODS—KEEWATIN, ONTARIO

RECORDS OF LAKE OF THE WOODS MILLING CO., AT MILL "A"

Date	Footnote	Local Datum		Sea-level Datum	
		Fore Bay	Tail Race	Fore Bay	Tail Race
1896					
		′ ″	′ ″		
May 4		6 0	24 2	1058.31	1040.14
13		5 6	23 4	58.81	40.98
19		4 10	22 5	59.48	41.89
23		4 4	21 9	59.98	42.56
26		4 2	21 4	60.13	42.98
29		3 11	21 0	60.39	43.31
June 1		3 6	20 6	60.81	43.81
6		3 4	20 0	60.98	44.31
11		3 0	19 8	61.31	44.64
16		2 11	19 6	61.39	44.81
18	1	2 11	19 0	61.39	45.31
22		2 11	18 11	61.39	45.39
25		2 11	18 9	61.39	45.56
27		2 10½	18 7½	61.43	45.69
29		2 8	18 7½	61.64	45.69
July 2		2 8	18 4½	61.64	45.94
6		2 9½	18 7	61.52	45.73
9		2 5½	18 5½	61.85	45.85
11		2 4	18 5	61.98	45.89
16	2	2 7½	18 6½	61.68	45.77
17	3	2 3½	18 5	62.01	45.89
20		2 11	18 8	61.39	45.64
24		2 8½	18 8½	61.61	45.60
31		2 9½	18 9½	61.52	45.52
Aug. 4		2 11	18 10	61.39	45.48
18		2 11	19 0	61.39	45.31
24		3 00	19 2½	61.31	45.10
Sept. 2		3 7½	19 7½	60.68	44.69
8		3 8	19 9	60.64	44.56
15		3 10	20 0	60.48	44.31
23		3 8	20 2	60.64	44.14
30		4 2	20 6	60.14	43.81
Oct. 7		4 4	20 9	59.98	43.56
14		4 6	20 11	59.81	43.39
22		4 9	21 5½	59.56	42.85
30		5 4½	22 1	58.93	42.23
Nov. 21		5 1½	22 1	59.18	42.23
Dec. 11		5 4	22 5½	58.98	41.85
1897					
Mar. 13		6 7½	24 9½	1057.68	1039.52
Apr. 10		6 6	24 6	57.81	39.81
12		6 3	24 4	58.06	39.98
16		5 10½	23 8	58.43	40.64
20		5 6	23 0	58.81	41.31
23		5 2	22 6	59.14	41.81
26		5 0	22 1½	59.31	42.19
30		4 8½	21 8½	59.60	42.60
May 4		4 6	21 4	59.81	42.98
7		4 4½	21 2½	59.93	43.11
18		4 4	20 10	59.98	43.48
25		4 0	20 7	60.31	43.73
June 1		3 11	20 4	60.39	43.98
9		3 7	20 1½	60.73	44.19
17		3 7	19 8½	60.73	44.60
28		3 4	19 5½	60.98	44.85
July 3		3 4	19 4½	60.98	44.94
8		3 3	19 2	61.06	45.14
13		2 9½	18 11½	61.52	45.35
21		2 8	18 4½	61.64	45.93
23	4	2 7	18 4	61.73	45.98
1897—(contd.)					
July 28		2 6	18 3	1061.81	1046.06
29	5	2 5	18 2½	61.89	46.10
Aug. 6		2 8	18 3	61.64	46.06
25		3 0	18 6	61.31	45.81
Sept. 23		3 10	19 5	60.48	44.89
Oct. 5		4 8½	19 11½	59.60	44.35
18		5 1	20 6½	59.23	43.77
28		5 10½	21 0	58.43	43.31
29	6	4 6½	21 1	59.77	43.23
Nov. 5		4 8½	21 4½	59.60	42.93
1898					
Feb. 22		6 11	25 5	1057.39	1038.89
Mar. 15		7 3	26 0	57.06	38.31
Apr. 8		7 7	26 8	56.73	37.64
11		7 7	26 8	56.73	37.64
19	7	7 3	26 8	57.06	37.64
May 3		7 7½	26 5	56.68	37.89
16		7 8	26 6	56.64	37.81
25		7 7	26 5½	56.73	37.85
June 3		7 7	26 4½	56.73	37.94
10		7 2½	26 1	57.10	38.23
15		7 7½	26 0	57.10	38.31
22		7 2	25 9	57.14	38.56
28		6 7	25 1	57.73	39.23
July 4		6 3½	24 5	58.02	39.89
9		6 2	24 0	58.14	40.31
14		5 11	23 6	58.39	40.81
20		6 0	23 5½	58.31	40.85
26		5 8½	23 2	58.60	41.14
Aug. 3		5 9	23 0	58.56	41.31
13		5 6	22 8	58.81	41.64
30		5 5	22 5	58.89	41.89
Sept. 23		5 0½	22 1½	59.27	42.19
Oct. 1		4 11	21 10	59.39	42.48
12		5 1	21 11	59.23	42.39
15		4 9	22 4	59.56	41.98
18		5 3	23 6	59.06	40.81
20		5 0	23 10	59.31	40.48
28		4 8½	23 10½	59.60	40.43
31		4 4	23 11	59.98	40.39
Nov. 25		4 7	26 3	59.73	38.06
1899					
Feb. 16		4 6	25 0	1059.81	1039.31
Apr. 13		5 0	25 9	59.31	38.56
21		5 0½	23 3½	59.27	41.02
May 2		4 9	21 3	59.56	43.06
20		4 1	20 3	60.23	44.06
26		4 1	20 1	60.23	44.23
June 5		3 9	19 6	60.56	44.81
9		3 7	19 3	60.73	45.06
29		2 11	18 8	61.39	45.64
July 14		2 8	18 1	61.64	46.23
18		2 7	18 0	61.73	46.31
27		2 7	17 11	61.73	46.39

1. On tail water, changed gauge.
2. N. wind.
3. S. wind.
4. Very calm.
5. High water mark in flume.
6. Cleaned of front of rack.
7. Mill shut down.

TABLE 9—Continued

WATER LEVELS—LAKE OF THE WOODS—KEEWATIN, ONTARIO

RECORDS OF LAKE OF THE WOODS MILLING CO., AT MILL "A"

Date	Footnote	Local Datum		Sea-level Datum	
		Fore Bay	Tail Race	Fore Bay	Tail Race
1899—(contd.)					
		′ ″	′ ″		
Aug. 5		2 10	18 0	1061.48	1046.31
21		3 0	18 5	61.31	45.89
Sept. 5		3 5	18 7½	60.89	45.69
18		3 11	19 2	60.39	45.14
27		3 11	19 5	60.39	44.89
28	1	5 3½	19 8½	59.02	44.60
Oct. 2		4 2	20 2	60.14	44.14
4		4 3	21 6	60.06	43.81
5		4 4	22 1	59.98	42.23
6		4 1½	22 6	60.18	41.81
7		4 3½	22 9	60.02	41.56
14		4 2	25 3	60.14	39.06
23		3 10	25 10	60.48	38.48
Nov. 6		3 9	25 10	60.56	38.48
26		3 4	25 10	60.98	38.48
Dec. 2		3 8	25 10	60.64	38.48
12		3 10	26 0	60.48	38.31
16	2	3 10	23 9	60.48	40.56
21		3 10	23 4	60.48	40.98
27		3 11	23 4	60.39	40.98
1900					
Jan. 8		4 3	23 8	1060.06	1040.64
18		4 2	23 8	60.14	40.64
Mar. 8		5 0½	24 9	59.27	39.56
19		5 3	24 11½	59.06	39.35
31		5 5½	25 3	58.85	39.06
Apr. 7		5 6	26 6	58.81	37.81
12		5 5½	26 11½	58.85	37.35
21		5 5½	27 2½	58.85	37.10
May 7		5 5	27 3	58.89	37.06
12		5 7	27 2	58.73	37.14
19		5 8	27 3	58.64	37.06
30		5 9	27 5	58.56	36.89
June 5		5 8	27 5	58.64	36.89
9		5 8	27 5	58.64	36.89
16		6 0	27 5	58.31	36.89
28		6 3	27 4½	58.06	36.93
July 6		6 0	27 5	58.31	36.89
9		6 1½	27 5	58.18	36.89
21		6 1	27 3	58.23	37.06
Aug. 2		6 5	27 4	57.89	36.98
16		6 2½	27 1	58.10	37.23
25		6 2	27 1	58.14	37.23
Sept. 12		5 2	26 10	59.14	37.48
17		5 0	26 7	59.31	37.73
22		4 5	26 4	59.89	37.98
25		4 0	26 1	60.31	38.23
28		4 0	25 0	60.31	39.31
Oct. 2		4 4	25 0	59.98	39.31
8		3 8½	23 11½	60.60	40.35
11		3 6	22 6	60.81	41.81
13		3 4	20 7	60.98	43.73
16		3 4	19 9	60.98	44.56
17		3 2	19 5	61 14	44.89
19		3 2	19 0	61.14	45.31
20		3 2	19 0	61.14	45.31
23		3 1	18 8	61.23	45.65
24		3 2	18 8	61.14	45.65
25		3 2	18 6½	61.14	45.77
27		3 0	18 5	61.31	45.89
Oct. 30		2 10½	18 5	1061.43	1045.89
31		2 11	18 3	61.39	46.06
Nov. 3		2 8	18 0	61.64	46.31
4		2 2	18 2	62.14	46.14
6		2 11	18 1	61.39	46.23
8		2 9	18 1	61.56	46.23
9		2 4	17 11	61.98	46.39
10		2 11	18 0	61.39	46.31
12		2 11	18 0	61.39	46.31
14		2 9	18 0	61.56	46.31
16		2 8	17 11	61.64	46.39
17		2 8	17 10	61.64	46.48
20		2 8	17 11	61.64	46.39
22		2 7	17 10	61.73	46.48
24		2 7	17 10	61.73	46.48
29		2 7	17 9½	61.73	46.52
Dec. 13	3	2 10	17 10	61.48	46.48
1901					
Feb. 23	3	4 2	20 0	1060.14	1044.31
Apr. 1		5 2	21 4	59.14	42.98
8		5 0	25 0	59.31	39.31
12		4 7	26 6	59.73	37.81
May 8		3 10½	23 10	60.43	40.48
9		3 9	23 5	60.56	40.89
10		3 6	23 2	60.81	41.14
14		3 6	23 0	60.81	41.31
15		3 6½	22 11	60.77	41.39
16		3 7	22 10	60.73	41.48
17		3 6	22 8½	60.81	41.60
20		3 8	21 3	60.64	43.06
21		3 8	21 1	60.64	43.23
22		3 11	21 0	60.39	43.31
23		4 0	21 0	60.31	43.31
24		3 10	20 11	60.48	43.39
25		3 8½	20 10	60.60	43.48
27		3 8½	20 11	60.60	43.39
28		3 9	20 10	60.56	43.48
29		3 9½	20 10	60.52	43.48
30		3 10	20 10	60.48	43.48
31		3 11	20 10	60.39	43.48
June 1		3 9½	20 10	60.52	43.48
4		3 8	20 9	60.64	43.56
6		4 2	20 11	60.14	43.39
8		3 10½	20 11	60.43	43.39
11		4 0	20 10	60.31	43.48
13		3 10	20 10	60.48	42.48
18		3 9	20 9	60.56	43.56
20		3 11	20 9	60.39	43.56
22		3 11	20 9½	60.39	43.52
24		3 10½	20 9½	60.43	43.52
26		3 9	20 9	60.56	43.56
28		3 9	20 8½	60.56	43.60
July 2		3 9	20 9	60.56	43.56
4		3 9	20 9	60.56	43.56
5		3 8½	20 7½	60.60	43.69
6		3 9	20 7	60.56	43.73
8		3 6	20 6	60.81	43.81
9		3 9	20 6	60.56	43.81
10		3 7¾	20 5½	60.66	43.85

1. Strong north wind. 2. Taking out stop logs at dam. 3. Ice frozen out too far to measure correct. but has kept gradually falling below as well as above. (This note covers the period from Dec. 13, 1900, to Feb. 23, 1901.—Engrs.)

TABLE 9—Continued

WATER LEVELS—LAKE OF THE WOODS—KEEWATIN, ONTARIO

RECORDS OF LAKE OF THE WOODS MILLING CO., AT MILL "A"

Date	Footnote	Local Datum: Fore Bay	Local Datum: Tail Race	Sea-level Datum: Fore Bay	Sea-level Datum: Tail Race
1901—(contd.)					
July 13		3 6½	20 4½	1060.75	1043.96
17		3 9	20 5	60.56	43.89
22		3 9	20 5	60.56	43.89
24		3 11	20 7	60.39	43.73
29		3 10	20 8	60.48	43.64
Aug. 1		3 10	20 8	60.48	43.64
6		4 2½	20 10	60.10	43.48
19	1	4 4½	21 1	59.93	43.23
22		4 3	21 7	60.06	42.73
24		4 3	23 1	60.06	41.23
26		4 2	23 11	60.14	40.39
28		4 1	24 2	60.23	40.14
31		4 1	24 6	60.23	39.81
Sept. 3		4 1½	24 8	60.19	39.64
5		4 1	24 8	60.23	39.64
11		4 1½	25 0	59.93	39.31
17		4 7	25 2	59.73	39.14
18		4 5	25 3	59.90	39.06
21		4 7	25 3	59.73	39.06
25		4 8	25 4	59.65	38.98
Oct. 7		4 8	25 6	59.64	38.81
16		4 10	25 10	59.48	38.48
23		4 7½	25 11	59.68	38.39
28		4 8	26 1	59.64	38.23
Nov. 2		4 7	26 1	59.73	38.23
18		4 11	26 5	59.39	37.99
26		5 1	26 6	59.23	37.81
Dec. 5		5 1	26 6	59.23	37.81
11		5 1½	26 6	59.18	37.81
17		5 3	26 6	59.06	37.81
28		5 3	26 6	59.06	37.81
1902					
Jan. 20		5 8	26 8	1058.64	1037.64
Feb. 13		5 10	26 10	58.48	37.48
Mar. 10		6 1	27 1	58.23	37.23
Apr. 4		6 2	27 0	58.14	37.31
24		6 0	26 10	58.31	37.48
30		5 9	26 10	58.56	37.48
May 8	2	5 8	26 4	58.64	37.98
13		5 0	26 4	59.31	37.98
20		4 8	26 2	59.64	38.14
June 2		4 2	26 1	60.14	38.23
6		3 11	25 2	60.39	39.14
7		4 1	23 11	60.23	40.39
9		4 0	22 7	60.31	41.73
11		4 1	21 11	60.23	42.39
14		4 0	21 0	60.31	43.31
16		3 11	20 7	60.39	43.73
17		3 10½	20 3½	60.43	44.02
18		3 9	19 9	60.56	44.56
19		4 2	19 9	60.14	44.56
21		4 1½	19 7½	60.19	44.69
23		4 1	19 7	60.23	44.73
25		4 4	19 6½	59.98	44.77
26		4 1½	19 6½	60.19	44.77
July 2		4 1	19 7	60.23	44.73
5		3 10	19 5	60.48	44.89
8		3 9¾	19 4½	60.50	44.94
July 10		3 11	19 4½	1060.39	1044.94
14		4 1½	19 5½	60.18	44.85
16		3 11½	19 5½	60.35	44.85
18		4 0½	19 5½	60.27	44.85
21	3	4 0¾	19 7¾	60.25	44.67
23	3	4 0	19 11½	60.31	44.35
24		4 0	20 7	60.31	43.73
26		3 10½	21 10½	60.43	42.44
28		3 11	22 5	60.39	41.89
Aug. 4		4 3	23 0	60.06	41.31
7		4 4	23 0	59.98	41.31
9		3 9	22 11	60.56	41.39
11		4 1½	23 0½	60.18	41.27
16		4 0¾	23 0	60.27	41.31
22		4 2¼	23 1	60.10	41.23
Sept. 1		4 6½	23 2	59.77	41.14
2		4 4½	23 1½	59.93	41.19
3	4	4 9	23 1	59.56	41.23
4		4 4½	23 9	59.93	40.56
5		4 1	24 0	59.23	40.31
8		4 10	25 0	59.48	39.31
Oct. 17		5 2½	25 1½	59.10	39.19
31		5 1½	25 0	59.18	39.31
Nov. 4	5	5 6	25 0	58.81	39.31
6		5 4	25 0	58.98	39.31
7	6	5 0	25 0	59.31	39.31
1903					
Jan. 12		5 1	25 2	1059.23	1039.14
Feb. 26		5 3	25 3	59.06	39.06
Apr. 11		4 6	25 8	59.81	38.64
18		4 3	25 4	60.06	38.98
21		4 1	25 1	60.23	39.23
30		3 8	24 10	60.64	39.48
May 4		3 8	24 10	60.64	39.48
5	7	3 7	23 10	60.73	40.48
6		3 7	22 11	60.73	41.39
7	8	3 7	21 10½	60.73	42.44
8		3 6½	21 3½	60.77	43.02
11		3 7½	20 7½	60.68	43.68
12		3 7	20 5	60.73	43.89
18		3 5½	19 10	60.85	44.48
22		3 5	19 6	60.89	44.81
23		3 4	19 5	60.98	44.89
25		3 3½	19 5	61.02	44.89
28		3 4	19 5	60.98	44.89
30		3 2½	19 5	61.10	44.89
June 1		3 3½	19 5½	61.02	44.85
8	9	3 5	19 8	60.89	44.64
9	10	3 7	19 8	60.73	44.64
12	11	3 2	19 7	61.14	44.73
16		3 6	19 10	60.81	44.48
20		3 7½	19 10½	60.68	44.44
23		3 7	20 0	60.73	44.31
July 8		3 5½	20 0	60.85	44.31
12		3 10	20 1½	60.48	44.18
20		3 11	20 6½	60.39	43.77
27		4 0	20 7	60.31	43.73
30		4 3	20 8	60.06	43.64

1. Stop logs put in at dam. 2. North wind. 3. Started putting in logs at dam. (Refers to July 21–23, inc.—Engrs.) 4. Putting in balance of stop logs. 5. NW. 6. SW. 7. Must be taking out stop logs. 8. All water on mill wheels and 6 bushels per hour feed taken off. 9. North wind. 10. North wind. 11. South wind.

TABLE 9—Continued

WATER LEVELS—LAKE OF THE WOODS—KEEWATIN, ONTARIO

RECORDS OF LAKE OF THE WOODS MILLING CO., AT MILL "A"

Date	Footnote	Local Datum		Sea-level Datum	
		Fore Bay	Tail Race	Fore Bay	Tail Race
1903—(contd.)					
		′ ″	′ ″		
Aug. 5	1				
8	2	4 6½	20 11	1059.77	1043.39
10		4 8½	21 3½	59.60	43.02
14		4 4	23 5	59.98	40.89
18		4 6	23 10	59.81	40.48
20		4 3	24 1	60.06	40.23
26		4 7	24 5	59.73	39.89
Sept. 14		4 9	24 7	59.56	39.73
1904					
Mar. 18		6 7½	25 8	1057.68	1038.64
Apr. 8		6 8	25 8	57.64	38.64
12		6 8	25 8	57.64	38.64
16		6 8	25 8	57.64	38.64
May 3		5 10	25 2	58.48	39.14
11		5 5	24 11	58.89	39.39
18	3	5 1	24 9	59.23	39.56
June 1		5 0	24 8	59.31	39.64
11		4 6	24 4	59.81	39.98
July 16		4 0	24 0	60.31	40.31
Aug. 23		4 7	24 1	59.73	40.23
Oct. 8		5 8	24 8	58.64	39.64
22		6 1	24 9½	58.23	39.52
Nov. 7	4	6 2	22 2	58.14	42.14
14		6 0	25 4	58.31	38.98
15		6 5	25 5	57.89	38.89
16		6 2	25 5	58.14	38.89
19		6 7	25 8	57.73	38.64
21		6 4	25 10	57.98	38.48
Dec. 1		6 10	26 0	57.48	38.31
10		6 10	26 2	57.48	38.14
1905					
Jan. 3		6 6	26 2	1057.81	1038.14
26		6 7	26 4	57.73	37.98
Feb. 21		6 11	26 5	57.39	37.89
28		7 1	26 5	57.23	37.89
Mar. 11		6 11½	26 6½	57.35	37.77
Apr. 10	5	7 2½	26 4	57.10	37.98
May 3	6	7 5	26 2	56.89	38.14
9		7 2	26 2	57.14	38.14
13		6 9	25 11	57.56	38.39
June 4		5 1½	25 7½	59.18	38.08
20		4 8	25 3	59.64	39.06
28	7				
July 3		3 11½	24 10	60.35	39.48
8	8				
10		3 5	23 11	60.89	40.39
13		3 6	23 0	60.81	41.31
15		3 3	22 2	61.06	42.14
20		3 2½	21 5½	61.10	42.85
21		3 0½	21 1½	61.27	43.19
22		3 2	20 11	61.14	43.39
24		3 0	20 9½	61.31	43.52
27		3 1	19 9½	61.23	44.52
29		3 1	19 7	61.23	44.73

Date	Footnote	Local Datum		Sea-level Datum	
		Fore Bay	Tail Race	Fore Bay	Tail Race
1905—(contd.)					
		′ ″	′ ″		
Aug. 1		3 1	19 5	1061.23	1044.89
5		3 0½	19 1	61.27	45.23
10		2 11	18 8	61.39	45.64
12		3 0½	18 8	61.27	45.64
15		2 11½	18 4½	61.35	45.93
17		2 8½	18 1½	61.60	46.19
20	9	2 2½	18 1	62.10	46.23
29		3 0½	18 1	61.27	46.23
30	10	3 3	18 1	61.06	46.23
Sept. 1		3 1½	18 8½	61.18	45.60
6		3 3	18 11	61.06	45.39
9	11	3 5	18 10½	60.89	45.43
11		3 5	19 0	60.89	45.31
12	12	3 7½	19 0½	60.68	45.27
14	13	3 5	19 1	60.89	45.23
15		3 4½	19 1½	60.93	45.19
16		3 5	19 6	60.89	44.81
18		3 5	19 11	60.89	44.39
19		3 1½	19 9½	61.18	44.52
20	14	2 11	19 11	61.39	44.39
22		3 3	20 0	61.06	44.31
23		3 1	20 1	61.23	44.23
25		3 1	20 2	61.23	44.14
28		3 1	20 2	61.23	44.14
Oct. 1	15	1 11	20 2	62.39	44.14
4		3 3½	20 4½	61.02	43.93
5		3 2½	20 5½	61.10	43.85
7		3 3	20 5½	61.06	43.85
9		3 3	20 8	61.06	43.64
11	16	3 7	20 10	60.73	43.48
14	17	3 5½	20 11	60.85	43.39
16		3 6	21 2	60.81	43.14
23		3 9	21 3	60.56	43.06
24	18	3 7	21 7	60.73	42.73
25	19	3 1½	22 6½	61.18	41.77
27		3 7	23 7	60.73	40.73
30		3 4	24 3	60.98	40.06
Nov. 3		3 6	24 6	60.81	39.81
Dec. 12		3 4	24 10	60.98	39.48
27		3 3½	24 7½	61.02	39.68
1906					
Jan. 1		3 4	24 7	1060.98	1039.73
5	20				
6		3 4½	24 7½	60.93	39.68
27		3 3	24 3	61.06	40.06
Feb. 17	21				
24	22				
Mar. 3		3 9½	24 10	60.52	39.48
17		3 10	24 8	60.49	39.64
24	23				
Apr. 2		4 1	24 8	60.23	39.64
7	24	4 2	24 6½	60.14	39.77
18		3 10	24 0½	60.48	40.27
24		3 7	23 0	60.73	41.31
25		3 7	22 9	60.73	41.56
26	25	3 7	22 4	60.73	41.98
27	26	3 7½	21 8½	60.68	42.58
28	27	3 7	21 5½	60.73	42.85
30		3 8	21 0	60.64	43.31

1. Started clearing driftwood, four of our men helping. 2. Putting in stop logs. 3. 19″ in 1 month. 4. Stop logs out to remove driftwood. 5. West wind. 6. North wind. 7. Took out 12 stop logs at dam. 8. Took out 15 stop logs south side of dam. 9. Mill closed (Sunday). 10. Strong north wind. 11. Strong north wind. 12. North wind. 13. Heavy rain east wind, started putting in few stop logs on 13th. 14. South wind. 15. Very strong south wind & mill shut down Sunday. 16. Strong N. W. wind. 17. Closed out water to fix bridge over raceway Oct. 15th.,/05. 18. Putting in stop logs at dam. 19. Strong south wind, snowing. 20. Took out four large stop logs. 21. Took out 5 large logs. 22. 6 stop logs taken out at dam. 23. 15 stop logs taken out at dam. 24. 12 stop logs taken out at dam. 25. Taking out stop logs. 26. Taking out stop logs. 27. Taking out stop logs.

TABLE 9—Continued

WATER LEVELS—LAKE OF THE WOODS—KEEWATIN, ONTARIO

RECORDS OF LAKE OF THE WOODS MILLING CO., AT MILL "A"

Date	Footnote	Local Datum		Sea-level Datum	
		Fore Bay	Tail Race	Fore Bay	Tail Race
1906—(contd.)					
		′ ″	′ ″		
May 1		3 7½	20 8	1060.68	1043.64
2		3 7	20 7	60.73	43.73
3	1	3 6½	20 4½	60.77	43.93
4		3 9	20 3	60.56	44.06
5		3 9	20 2½	60.56	44.10
10		3 6	20 1½	60.81	44.19
11		3 6	20 1	60.81	44.23
15		3 6	20 2	60.81	44.14
18	2	3 3½	20 1½	61.02	44.19
21		3 7½	20 3½	60.68	44.02
22		3 10	20 4	60.48	43.98
23		3 9	20 5	60.56	43.89
24		3 10	20 6	60.48	43.81
25		3 11	20 7	60.39	43.73
26	3	4 2	20 9	60.14	43.56
27	4	3 5	20 9	60.89	43.56
28		3 10	20 10	60.48	43.48
June 1		3 8½	20 10	60.60	43.48
2		3 8	20 10	60.64	43.48
3	5	3 3½	20 11½	61.02	43.35
4		3 8	21 1	60.64	43.23
6		3 8	21 2	60.64	43.14
7		3 6	21 3	60.81	43.06
11		3 8	21 8	60.64	42.64
13		3 6	21 8	60.81	42.64
15		3 9	21 9	60.56	42.56
16		3 8	21 9½	60.64	42.52
20		3 11	21 9	60.39	42.56
25		3 9	21 10½	60.56	42.43
26		3 8	21 10½	60.64	42.43
July 3		3 7½	21 10½	60.68	42.43
9		3 8	21 10½	60.64	42.43
13		3 9	21 11	60.56	42.39
16		3 11	22 1	60.39	42.23
25		4 0	22 1	60.31	42.23
Aug. 11		4 1	22 2	60.23	42.14
27		4 3	22 6½	60.06	41.77
Sept. 10	6	4 7	22 9	59.73	41.56
12		4 8½	22 10½	59.60	41.43
17		4 9	23 2	59.56	41.14
18		4 9	23 5	59.56	40.89
19	7	4 9½	23 10½	59.52	40.43
20		4 9	25 1	59.56	39.23
26		4 11	25 8	59.39	38.64
Oct. 2		4 11	25 11	59.39	38.39
4	8	5 4	25 11½	58.98	38.35
9	9	5 10	25 6½	58.48	38.77
11		5 0	25 3½	59.31	39.02
12		5 1	25 3	59.23	39.06
13	10	5 4	24 10	58.98	39.48
15		5 0	24 7½	59.31	39.68
16		4 11	24 6½	59.39	39.77
17	11	4 11	24 4½	59.39	39.93
18		5 1½	24 7½	59.18	39.68
19		5 3½	20 10	59.02	39.48
20		5 4½	24 9½	58.93	39.52
22		5 4	24 11	58.98	39.39
23		5 4	24 11½	58.98	39.35
24		5 2½	24 11½	59.10	39.35
25		5 1½	24 11½	59.18	39.35
26		5 3½	24 11½	59.02	39.35
27		5 8	25 1	58.64	39.23
Oct. 29		5 6½	25 2½	1058.77	1039.10
30		5 5	25 2	58.89	39.14
31		5 2	25 0	59.14	39.31
Nov. 1		5 3	25 1	59.06	39.23
2		5 4	25 1	58.98	39.23
3		5 5	25 2	58.89	39.14
5	12	5 6	25 3	58.81	39.06
7		5 5½	25 2½	58.85	39.10
8		5 2½	25 2½	59.10	39.10
9		5 4½	25 5½	58.93	38.85
10	13	5 6½	25 5½	58.77	38.85
12		5 5	25 9	58.89	38.56
15		5 6	25 10	58.81	38.48
17		5 8½	25 10½	58.60	38.43
28		5 6	26 1	58.81	38.23
1907					
Mar. 23		6 4	26 10	1057.98	1037.48
Apr. 18		6 4	26 10	57.98	37.48
30		6 4	26 10	57.98	37.48
May 14		6 1	26 7	58.23	37.73
22		5 7	26 5	58.73	37.89
29	14	5 5	26 5	58.89	37.89
June 7		5 3	26 9	59.06	37.56
10		5 2	26 5	59.14	37.89
12	15	5 2	26 0	59.14	38.31
24		4 11	25 7	59.39	38.73
July 2		4 10	25 7	59.48	38.73
7		4 11	25 6	59.39	38.81
20		4 9	25 8	59.56	38.64
22	16	5 0	26 2	59.31	38.14
Aug. 1		5 0	26 5	59.31	37.89
12		4 6	26 1	59.81	38.23
15	17	4 0	25 7	60.31	38.73
19		4 1	25 6	60.23	38.81
26		4 2	24 11	60.14	39.38
29		4 1	24 9	60.23	39.56
Sept. 2		4 1	24 9	60.23	39.56
9	18	4 0	24 8	60.31	39.64
27		3 4	23 4	60.98	40.98
Oct. 4		3 2	23 0	61.14	41.31
11	19	3 8	23 0	60.64	41.31
14		3 5	22 11	60.89	41.39
16	20	3 8	22 10	60.64	41.48
28		3 5	22 10	60.89	41.48
Nov. 7		3 3	22 10	61.06	41.48
25		3 6	22 10	60.81	41.48
Dec. 9		3 6	23 1½	60.81	41.19
1908					
Jan. 25	21	3 7	23 7	1060.73	1040.73
Mar. 12	22	3 5	23 6	60.89	40.81
Apr. 10		3 2	23 0	61.14	41.31
May 14		3 1	22 6	61.23	41.81
June 16		3 0	21 0	61.31	43.31
July 2	23	3 0	21 0	61.31	43.31
20		3 2	21 4	61.14	42.98

1. 112 logs out altogether. 2. Strong southwest wind for 24 hours. 3. Strong north wind blowing for 3 days. 4. Sunday, mill not running, south wind. 5. Sunday, not running. 6. Hanson started clearing driftwood to put in stop logs on Sept. 4th. 7. Completed putting in logs at dam today. 8. Strong north wind. 9. 20 stop logs removed on Oct. 7th, 1906. Strong north wind. 10. 13 stop logs removed today. 11. 8 stop logs put in today, 5 small and 3 large ones. 12. 11 logs put in on the 6th., 8 small. and 3 large 13. Strong north wind. 14. A few stop logs put in (28 put in) on 29 to 31 and about half taken out (12 taken out) again to-day. 15. 8 stop logs taken out on 11th. June. 16. stop logs put in and driftwood north side cleared away, 15th. to 20th. 17. 22 stop logs taken out on south side. 18. 19 logs removed 23rd. Sept. 19. Strong north wind. 20. 4 stop logs taken out, north wind. 21. Mill closed down. 22. Mill closed, 17 logs removed at dam, 2nd. to 7th. 23. Mill closed down.

TABLE 9—Continued

WATER LEVELS—LAKE OF THE WOODS—KEEWATIN, ONTARIO

RECORDS OF LAKE OF THE WOODS MILLING CO., AT MILL "A"

Date	Footnote	Local Datum		Sea-level Datum	
		Fore Bay	Tail Race	Fore Bay	Tail Race
1908—(contd.)					
		′ ″	′ ″		
Aug. 6	1	3 8	21 6	1060.64	1042.81
Sept. 2	2	4 2	22 1	60.14	42.23
7	...	4 4	23 0	59.98	41.31
9	...	4 6	23 5	59.81	40.89
18	...	4 10	23 11	59.48	40.39
28	...	4 8	23 11	59.64	40.39
Oct. 10	...	5 4	24 1	58.98	40.23
12	...	4 4	24 1	59.98	40.23
14	...	4 7	24 7	59.73	39.73
Nov. 23	3	5 1	26 9	59.23	37.56
28	...	4 11	26 10	59.39	37.48
Dec. 7	...	4 11	27 5	59.39	36.89
1909					
Jan. 29	...	5 2	27 2	1059.14	1037.14
Feb. 3	...	5 4	27 0	58.98	37.31
Mar. 22	...	5 10	27 2	58.48	37.14
Apr. 23	...	6 2	27 3	58.14	37.06
May 17	...	5 8	27 1	58.64	37.23
20	...	5 7	26 9	58.73	37.56
June 1	...	5 5	27 0	58.89	37.31
11	...	5 3	26 11	59.06	37.39
21	4	5 0	27 2	59.31	37.14
July 6	...	5 0	26 11	59.31	37.39
Aug. 26	...	4 8	27 0	59.64	37.31
Sept. 8	...	5 1	26 10	59.23	37.48
16	...	5 0	26 9	59.31	37.56
28	...	4 11	26 9	59.39	37.56
Oct. 5	...	4 10	26 10	59.48	37.48
13	...	5 1	26 10	59.23	37.48
Nov. 2	...	4 7	26 9	59.73	37.56
9	5	4 2	26 6	60.14	37.81
18	6	4 5	26 9	59.89	37.56
Dec. 3	...	4 6	26 9	59.81	37.56
1910					
Feb. 18	...	4 3	26 8	1060.06	1037.64
Mar. 5	...	3 9	26 4	60.56	37.98
12	...	3 9	25 11	60.56	38.39
23	...	3 9	26 5	60.56	37.89
30	7	3 6	25 6	60.81	38.81
Apr. 1	...	3 5	23 9	60.89	40.56
2	...	3 5	23 2	60.89	41.14
7	...	3 1	22 0	61.23	42.31
25	8	2 9	21 9	61.56	42.56
29	...	2 11	20 9	61.39	43.56
May 3	9	2 10	20 9	61.48	43.56
13	...	3 0	20 10	61.31	43.48
21	10	3 2	21 0	61.14	43.31
25	11	3 3	21 2	61.06	43.14
1910—(contd.)					
		′ ″	′ ″		
June 14	12	3 7	22 8	1060.73	1041.64
July 10	13	4 6	24 1	59.81	40.23
13	...	4 5	24 9	59.89	39.56
22	14	4 10	25 10	59.48	38.48
27	...	4 11	26 5	59.39	37.89
Aug. 11	...	5 1	26 10	59.23	37.48
24	15	5 6	27 0	58.81	37.31
Sept. 15	...	5 9	27 3	58.56	37.06
Oct. 6	...	6 3	27 1	58.06	37.23
19	16	7 3	27 4	57.06	36.98
Nov. 1	...	6 7	27 11	57.73	36.39
4	17	6 5	27 11	57.89	36.39
9	18	6 11	28 1	57.39	36.23
15	...	6 9	28 0	57.56	36.31
Dec. 11	...	7 0	28 0	57.31	36.31
1911					
Jan. 23	...	7 6	28 0	1056.81	1036.31
31	...	7 9	28 0	56.56	36.31
Feb. 15	...	7 7	28 3	56.73	36.06
Mar. 21	...	8 1	28 3	56.23	36.06
May 26	...	8 4	28 0	55.98	36.31
June 15	...	7 9	27 10	56.56	36.48
29	...	7 4	28 0	56.98	36.31
July 4	...	7 6	28 0	56.81	36.31
5	...	7 9	28 0	56.56	36.31
10	19	7 4	28 1	56.98	36.23
13	20	8 0	27 10	56.31	36.48
18	...	8 4	28 0	55.98	36 31
25	21	9 0	28 0	55.31	36.31
Aug. 23	22	.....	.....	.....	.....
25	...	8 6	27 11	55.81	36.39
Nov. 14	...	8 8	28 8	55.64	35.64
22	...	8 6	29 0	55.81	35.31
Dec. 2	...	8 4	29 2	55.98	35.14
13	...	8 3	29 3	56.06	35.06
1912					
Jan. 12	...	8 0	29 6	1056.31	1034.81
Feb. 6	...	8 0	29 6	56.31	34.81
15	...	7 10	29 6	56.48	34.81
24	...	7 10	29 6	56.48	34.81
Mar. 20	...	7 10	29 6	56.48	34.81
Apr. 11	...	7 9	29 6	56.56	34.81
May 3	...	7 0	29 0	57.31	35.31
8	...	6 4	29 1	57.98	35.23
16	...	6 2	29 5	58.14	34.89
27	...	6 4	29 2	57.98	35.14
30	...	6 0	28 11	58.31	35.39

1. North wind. 2. Putting in stop logs at dam. 3. Hanson put in 41 logs at dam on 16, 17, 18, all logs now in place. 4. Heavy rain yesterday first of season. 5. Strong north wind. 6. Hanson working up at dam and removing a portion of driftwood, 16, 17, 18, November. (Strong south wind) 7. Heavy rain last 3 days, water in lake raising fast, Hanson removing stop logs. 107 stop logs taken out and mill closed. 8. Mill closed 40 more stop logs taken out on April 26th. 9. Mill closed. 10. Mill "A" closed. 11. Mill "A" closed. 12. 62 stop logs put in on 10, 11, 13, June. 13. 60 stop logs put in on 8, 9, 11, 12. 14. 40 stop logs put in 20, 21, 22nd., now all in. 15. Hanson at dam plugging up all leaks possible. 16. Very strong north wind. 17. Strong south wind. 18. N. west wind. 19. Very heavy rain on 8th., and south wind today 10th. 20. Strong N. W. wind for 3 days. 21. Strong N. W. wind blowing for some days 22. Jas. Fraser started repairing dam at Norman on 23rd. Aug.

Mill "A." Headrace closed June 22 to Nov. 22, 1912. Flume No. 2 closed 2 hours for 1 day in July, 1914, to inspect wheels. Flume No. 1 closed 6 hours on Feb. 14, 1914. Mill shut down Tuesday, Mar. 25, 1913, for rest of the week.

Mill "C." Headrace closed Apr. 15–19, 1914.

TABLE 10

WATER LEVELS—LAKE OF THE WOODS—KENORA, ONTARIO

RECORDS OF KENORA MUNICIPAL POWER PLANT

1907	JULY				AUGUST				SEPTEMBER			
	Local Datum		Sea-level Datum		Local Datum		Sea-level Datum		Local Datum		Sea-level Datum	
	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race
1									98.20	76.30	1060.85	1039.30
2									98.20	76.20	60.85	39.20
3									98.10	.....	60.75	.....
4									98.20	76.25	60.85	39.25
5									98.25	76.25	60.90	39.25
6									98.30	76.30	60.95	39.30
7									98.40	76.35	61.05	39.35
8									98.40	76.40	61.05	39.40
9									98.30	76.30	60.95	39.30
10									98.49	76.45	61.14	39.45
11									98.45	76.45	61.10	39.45
12									98.35	76.45	61.00	39.45
13									98.50	76.52	61.15	39.52
14									98.50	76.58	61.15	39.58
15									98.70	76.60	61.35	39.60
16									98.55	76.52	61.20	39.52
17									98.60	76.55	61.25	39.55
18									98.70	76.60	61.35	39.60
19									98.50	76.55	61.15	39.55
20									98.70	76.75	61.35	39.75
21					98.00	75.70	1060.65	1038.70	98.85	76.80	61.50	39.80
22					98.10	75.90	60.75	38.90	98.88	76.88	61.53	39.88
23					98.15	76.00	60.80	39.00	98.00	76.85	60.65	39.85
24					98.00	76.15	60.65	39.15	98.55	77.00	61.20	40.00
25					98.05	76.05	60.70	39.05	98.90	77.35	61.55	40.35
26					98.00	76.00	60.65	39.00	98.85	77.50	61.50	40.50
27					98.20	76.10	60.85	39.10	98.90	77.60	61.55	40.60
28					98.10	76.15	60.75	39.15	99.10	77.85	61.75	40.85
29					98.20	76.20	60.85	39.20	99.00	77.75	61.65	40.75
30					98.20	76.20	60.85	39.20	99.05	77.75	61.70	40.75
31					98.30	76.25	60.95	39.25	.....	.....	.....	.....

1907	OCTOBER				NOVEMBER				DECEMBER			
1	99.10	77.85	1061.75	1040.85	99.28	78.25	1061.93	1041.25	99.29	77.75	1061.94	1040.75
2	99.15	77.95	61.80	40.95	99.18	78.20	61.83	41.20	99.23	77.80	61.88	40.80
3	99.10	78.00	61.75	41.00	99.40	78.15	62.05	41.15	99.21	77.80	61.86	40.80
4	99.15	78.00	61.80	41.00	99.37	78.10	62.02	41.10	99.21	77.80	61.86	40.80
5	99.15	78.00	61.80	41.00	99.30	78.15	61.95	41.15	99.24	77.80	61.89	40.80
6	99.10	78.00	61.75	41.00	99.34	78.20	61.99	41.20	99.29	77.80	61.94	40.80
7	98.95	77.90	61.60	40.90	99.57	78.25	62.22	41.25	99.27	77.80	61.92	40.80
8	99.40	78.00	62.05	41.00	99.48	78.30	62.13	41.30	99.21	77.80	61.86	40.80
9	98.95	78.10	61.60	41.10	99.20	78.25	61.85	41.25	99.21	77.80	61.86	40.80
10	99.10	78.10	61.75	41.10	99.13	78.15	61.78	41.15	99.21	77.80	61.86	40.80
11	99.00	78.00	61.65	41.00	99.23	78.05	61.88	41.05	99.18	77.40	61.83	40.40
12	99.20	78.10	61.85	41.10	99.58	78.20	62.23	41.20	99.21	77.40	61.86	40.40
13	99.50	78.10	62.15	41.10	98.90	78.25	61.55	41.25	99.20	77.40	61.85	40.40
14	99.25	78.10	61.90	41.10	.....	.....	.....	.....	99.21	77.40	61.86	40.40
15	99.30	78.15	61.95	41.15	99.30	78.25	61.95	41.25	99.21	77.40	61.86	40.40
16	99.31	78.20	61.96	41.20	99.32	78.25	61.97	41.25	99.21	77.40	61.86	40.40
17	99.00	78.20	61.65	41.20	99.36	78.15	62.01	41.15	99.21	77.40	61.86	40.40
18	99.25	78.15	61.90	41.15	99.25	78.10	61.90	41.10	99.23	77.40	61.88	40.40
19	99.25	78.15	61.90	41.15	99.43	78.05	62.08	41.05	99.22	77.40	61.87	40.40
20	99.28	78.10	61.93	41.10	99.41	78.04	62.06	41.04	99.18	77.40	61.83	40.40
21	99.57	78.08	62.22	41.08	99.27	78.02	61.92	41.02	99.21	77.40	61.86	40.40
22	99.28	78.20	61.93	41.20	99.32	78.02	61.97	41.02	99.26	77.40	61.91	40.40
23	99.38	78.16	62.03	41.16	99.41	78.01	62.06	41.01	99.12	77.40	61.77	40.40
24	99.36	78.20	62.01	41.20	99.40	77.90	62.05	40.90	99.13	77.40	61.78	40.40
25	99.21	78.15	61.86	41.15	99.29	77.90	61.94	40.90	.....	.....	.....	.....
26	99.80	78.20	62.45	41.20	99.19	77.91	61.84	40.91	99.11	77.40	61.76	40.40
27	99.05	78.10	61.70	41.10	99.19	77.98	61.84	40.98	99.09	77.40	61.74	40.40
28	99.42	78.10	62.07	41.10	99.29	77.98	61.94	40.98	99.02	77.40	61.67	40.40
29	99.25	78.10	61.90	41.10	99.30	77.98	61.95	40.98	c98.12	77.40	.....	40.40
30	99.42	78.12	62.07	41.12	99.29	77.98	61.84	40.98	99.13	77.40	61.78	40.40
31	99.41	78.20	62.06	41.20	.....	.....	.....	.....	99.05	77.40	61.70	40.40

c Record unreliable.

TABLE 10—Continued

WATER LEVELS—LAKE OF THE WOODS—KENORA, ONTARIO

RECORDS OF KENORA MUNICIPAL POWER PLANT

1908	JANUARY				FEBRUARY				MARCH			
	Local Datum		Sea-level Datum		Local Datum		Sea-level Datum		Local Datum		Sea-level Datum	
	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race
1	99.10	77.40	1061.75	1040.40	98.74	77.40	1061.39	1040.40	98.46	77.00	1061.11	1040.00
2	99.10	77.40	61.75	40.40	98.74	77.40	61.39	40.40	98.45	77.00	61.10	40.00
3	99.10	77.40	61.75	40.40	98.74	77.40	61.39	40.40	98.41	77.00	61.06	40.00
4	99.10	77.40	61.75	40.40	98.74	77.40	61.39	40.40	98.43	77.00	61.08	40.00
5	99.10	77.40	61.75	40.40	98.74	77.40	61.39	40.40	98.40	77.00	61.05	40.00
6	99.10	77.40	61.75	40.40	98.73	77.40	61.38	40.40	98.39	77.00	61.04	40.00
7	99.10	77.40	61.75	40.40	98.70	77.40	61.35	40.40	98.38	77.00	61.03	40.00
8	99.00	77.40	61.65	40.40	98.72	77.00	61.37	40.00	98.37	77.00	61.02	40.00
9	99.00	77.40	61.65	40.40	98.71	77.00	61.36	40.00	98.38	77.00	61.03	40.00
10	98.96	77.40	61.61	40.40	98.64	77.00	61.29	40.00	98.38	77.00	61.03	40.00
11	98.90	77.40	61.55	40.40	98.64	77.00	61.29	40.00	98.38	77.00	61.03	40.00
12	98.96	77.40	61.61	40.40	98.65	77.00	61.30	40.00	98.28	77.00	60.93	40.00
13	98.91	77.40	61.56	40.40	98.64	77.00	61.29	40.00	98.29	77.00	60.94	40.00
14	98.92	77.40	61.57	40.40	98.60	77.00	61.25	40.00	98.27	77.00	60.92	40.00
15	98.85	77.40	61.50	40.40	98.58	77.00	61.23	40.00	98.27	77.00	60.92	40.00
16	98.82	77.40	61.47	40.40	98.60	77.00	61.25	40.00	98.27	77.00	60.92	40.00
17	98.82	77.40	61.47	40.40	98.58	77.00	61.23	40.00	98.27	77.00	60.92	40.00
18	98.81	77.40	61.46	40.40	98.57	77.00	61.22	40.00	98.27	77.00	60.92	40.00
19	98.81	77.40	61.46	40.40	98.53	77.00	61.18	40.00	98.27	77.00	60.92	40.00
20	98.95	77.40	61.60	40.40	98.61	77.00	61.26	40.00	98.27	77.00	60.92	40.00
21	98.90	77.40	61.55	40.40	98.61	77.00	61.26	40.00	98.20	77.00	60.85	40.00
22	98.90	77.40	61.55	40.40	98.60	77.00	61.25	40.00	98.10	77.00	60.75	40.00
23	98.88	77.40	61.53	40.40	98.60	77.00	61.25	40.00	98.00	77.00	60.65	40.00
24	98.85	77.40	61.50	40.40	98.53	77.00	61.18	40.00	97.95	77.00	60.60	40.00
25	98.81	77.40	61.46	40.40	98.52	77.00	61.17	40.00	.....	.....	.....	40.00
26	98.80	77.40	61.45	40.40	98.51	77.00	61.16	40.00	97.95	77.00	60.60	40.00
27	98.82	77.40	61.47	40.40	98.51	77.00	61.16	40.00	97.95	77.00	60.60	40.00
28	98.80	77.40	61.45	40.40	98.51	77.00	61.16	40.00	98.00	77.00	60.65	40.00
29	98.78	77.40	61.43	40.40	98.45	77.00	61.10	40.00	97.95	77.00	60.60	40.00
30	98.78	77.40	61.43	40.40	.....	.....	.....	.....	97.90	77.00	60.55	40.00
31	98.75	77.40	61.40	40.40	.....	.....	.....	.....	97.90	77.00	60.55	40.00

1908	APRIL				MAY				JUNE			
1	97.90	77.00	1060.55	1040.00	98.05	77.65	1060.70	1040.65	98.50	78.90	1061.15	1041.90
2	97.90	77.00	60.55	40.00	98.15	77.60	60.80	40.60	98.50	79.00	61.15	42.00
3	97.90	77.00	60.55	40.00	98.20	77.70	60.85	40.70	98.50	79.00	61.15	42.00
4	97.90	77.00	60.55	40.00	98.20	77.56	60.85	40.56	98.60	79.10	61.25	42.10
5	97.90	77.00	60.55	40.00	98.20	77.60	60.85	40.60	98.60	79.40	61.25	42.40
6	97.90	77.00	60.55	40.00	98.20	77.60	60.85	40.60	98.70	79.60	61.35	42.60
7	97.90	77.00	60.55	40.00	98.24	77.64	60.89	40.64	98.70	79.70	61.35	42.70
8	97.90	77.00	60.55	40.00	98.25	77.64	60.90	40.64	98.40	79.60	61.05	42.60
9	97.85	77.00	60.50	40.00	98.25	77.68	60.90	40.68	98.40	79.70	61.05	42.70
10	97.85	77.00	60.50	40.00	98.27	77.66	60.92	40.66	98.60	79.70	61.25	42.70
11	97.85	77.00	60.50	40.00	98.20	77.60	60.85	40.60	98.80	79.90	61.45	42.90
12	97.85	77.00	60.50	40.00	98.10	77.80	60.75	40.80	98.70	79.90	61.35	42.90
13	97.80	77.10	60.45	40.10	98.20	77.90	60.85	40.90	98.70	79.90	61.35	42.90
14	97.80	77.10	60.45	40.10	98.20	77.90	60.85	40.90	98.40	79.80	61.05	42.80
15	97.80	77.10	60.45	40.10	98.20	77.90	60.85	40.90	98.60	79.80	61.25	42.80
16	97.80	77.10	60.45	40.10	98.20	77.90	60.85	40.90	98.60	79.80	61.25	42.80
17	97.80	77.10	60.45	40.10	98.20	78.00	60.85	41.00	98.70	79.70	61.35	42.70
18	97.90	77.35	60.55	40.35	98.20	78.00	60.85	41.00	98.60	79.70	61.25	42.70
19	97.80	77.35	60.45	40.35	98.20	78.20	60.85	41.20	98.70	79.80	61.35	42.80
20	97.80	77.30	60.45	40.30	98.00	78.10	60.65	41.10	98.60	79.80	61.25	42.80
21	97.80	77.30	60.45	40.30	98.20	78.20	60.85	41.20	98.60	79.80	61.25	42.80
22	97.80	77.40	60.45	40.40	98.50	78.40	61.15	41.40	98.60	79.80	61.25	42.80
23	97.80	77.45	60.45	40.45	98.40	78.40	61.05	41.40	98.60	79.80	61.25	42.80
24	97.80	77.45	60.45	40.45	98.50	78.40	61.15	41.40	98.60	79.80	61.25	42.80
25	97.80	77.40	60.45	40.40	98.40	78.40	61.05	41.40	98.70	79.80	61.35	42.80
26	97.90	77.50	60.55	40.50	98.40	78.40	61.05	41.40	98.80	79.90	61.45	42.90
27	97.96	77.45	60.61	40.45	98.40	78.80	61.05	41.80	98.70	80.00	61.35	43.00
28	98.00	77.55	60.65	40.55	98.30	78.90	60.95	41.90	98.70	79.90	61.35	42.90
29	98.09	77.60	60.74	40.60	98.40	78.90	61.05	41.90	98.40	79.90	61.05	42.90
30	98.17	77.58	60.82	40.58	98.50	78.90	61.15	41.90	98.40	79.90	61.05	42.90
31	.....	.....	.....	.....	98.50	79.00	61.15	42.00	.....	.....	.....	.....

TABLE 10—Continued

WATER LEVELS—LAKE OF THE WOODS—KENORA, ONTARIO

RECORDS OF KENORA MUNICIPAL POWER PLANT

1908	JULY				AUGUST				SEPTEMBER			
	Local Datum		Sea-level Datum		Local Datum		Sea-level Datum		Local Datum		Sea-level Datum	
	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race
1	98.60	79.85	1061.26	1042.85	98.12	79.53	1060.77	1042.53	97.75	79.30	1060.40	1042.30
2	98.70	79.85	61.35	42.85	98.35	79.53	61.00	42.53	97.90	79.00	60.55	42.00
3	98.70	79.88	61.35	42.88	98.39	79.40	61.04	42.40	97.88	78.60	60.53	41.60
4	98.75	79.90	61.40	42.90	98.35	79.45	61.00	42.45	97.92	78.47	60.57	41.47
5	98.62	79.90	61.27	42.90	98.10	79.45	60.75	42.45	97.75	78.21	60.40	41.21
6	98.45	79.80	61.10	42.80	98.00	79.40	60.65	42.40	97.88	78.10	60.53	41.10
7	98.55	79.80	61.20	42.80	98.10	79.40	60.75	42.40	98.00	77.82	60.65	40.82
8	98.65	79.82	61.30	42.82	98.11	79.35	60.76	42.35	97.82	77.65	60.47	40.65
9	98.50	79.82	61.15	42.82	98.05	79.31	60.70	42.31	98.02	77.60	60.67	40.60
10	98.45	79.81	61.10	42.81	98.09	79.25	60.74	42.25	97.80	77.50	60.45	40.50
11	98.47	79.81	61.12	42.81	98.00	79.30	60.65	42.30	97.75	77.48	60.40	40.48
12	98.42	79.72	61.07	42.72	97.93	79.25	60.58	42.25	97.72	77.35	60.37	40.35
13	98.41	79.60	61.06	42.60	97.88	79.25	60.53	42.25	.....	.....	.....	.....
14	98.32	79.60	60.97	42.60	98.00	79.25	60.65	42.25	97.75	77.25	60.40	40.25
15	98.32	79.60	60.97	42.60	98.00	79.20	60.65	42.20	97.92	77.25	60.57	40.25
16	98.40	79.60	61.05	42.60	98.00	79.15	60.65	42.15	97.81	77.30	60.46	40.30
17	98.30	79.50	60.95	42.50	97.92	79.10	60.57	42.10	97.80	77.30	60.45	40.30
18	98.22	79.42	60.87	42.42	98.05	79.20	60.70	42.20	97.52	77.20	60.17	40.20
19	98.43	79.44	61.08	42.44	97.80	79.10	60.45	42.10	97.82	77.35	60.47	40.35
20	98.55	79.50	61.20	42.50	97.95	79.10	60.60	42.10	97.73	77.03	60.38	40.03
21	98.30	79.44	60.95	42.44	97.91	79.20	60.56	42.20	.....	.....	.....	.....
22	98.30	79.45	60.95	42.45	97.75	79.05	60.40	42.05	97.82	77.15	60.47	40.15
23	98.35	79.41	61.00	42.41	97.73	79.02	60.38	42.02	97.63	77.18	60.28	40.18
24	98.40	79.44	61.05	42.44	97.72	78.98	60.37	41.98	97.45	77.10	60.10	40.10
25	98.41	79.50	61.06	42.50	97.80	78.98	60.45	41.98	97.43	77.10	60.08	40.10
26	98.53	79.53	61.18	42.53	97.90	78.95	60.55	41.95	97.42	77.20	60.07	40.20
27	98.32	79.55	60.97	42.55	97.92	78.99	60.57	41.99	97.61	77.15	60.26	40.15
28	98.34	79.53	60.99	42.53	97.72	78.90	60.37	41.90	97.45	77.00	60.10	40.00
29	98.33	79.54	60.98	42.54	97.70	78.85	60.35	41.85	97.58	77.05	60.23	40.05
30	98.25	79.50	60.90	42.50	98.00	79.20	60.65	42.20	97.40	77.10	60.05	40.10
31	98.35	79.52	61.00	42.53	98.10	79.30	60.75	42.30	.....	.....	.....	.....

1908	OCTOBER				NOVEMBER				DECEMBER			
1	97.58	77.02	1060.23	1040.02	97.40	75.47	1060.05	1038.47	97.00	73.95	1059.65	1036.95
2	97.92	77.15	60.57	40.15	97.28	75.32	59.93	38.32	97.02	74.00	59.67	37.00
3	97.43	77.10	60.08	40.10	97.15	75.45	59.80	38.45	96.90	73.95	59.55	36.95
4	97.45	76.95	60.10	39.95	97.18	75.40	59.83	38.40	96.98	73.82	59.63	36.82
5	97.60	76.90	60.25	39.90	97.35	75.45	60.00	38.45	96.60	73.60	.....	.....
6	97.58	77.05	60.24	40.05	97.10	75.45	59.75	38.45	96.50	73.50	.....	.....
7	97.35	77.00	60.00	40.00	97.22	75.45	59.87	38.45	*96.25	73.20	.....	.....
8	97.58	77.00	60.23	40.00	97.20	75.40	59.85	38.40	96.25	73.20	.....	.....
9	97.50	77.02	60.15	40.02	97.12	75.25	59.77	38.25	96.25	73.20	.....	.....
10	97.15	77.00	59.80	40.00	97.15	75.35	59.80	38.35	96.25	73.20	.....	.....
11	97.40	76.90	60.05	39.90	97.20	75.35	59.85	38.35	96.25	73.20	.....	.....
12	97.60	76.80	60.25	39.80	97.00	75.35	59.65	38.35	96.25	73.20	.....	.....
13	97.48	76.90	60.13	39.90	97.00	75.40	59.65	38.40	96.25	73.20	.....	.....
14	97.48	76.90	60.13	39.90	97.15	75.40	59.80	38.40	96.25	73.20	.....	.....
15	97.40	76.62	60.05	39.62	97.00	75.30	59.65	38.30	96.25	73.20	.....	.....
16	97.30	76.30	59.95	39.30	97.10	75.18	59.75	38.18	96.25	73.20	.....	.....
17	97.00	76.10	59.65	39.10	97.10	75.25	59.75	38.25	96.25	73.20	.....	.....
18	97.30	75.90	59.95	38.90	97.10	74.90	59.75	37.90	96.25	73.20	.....	.....
19	97.40	75.80	60.05	38.80	97.10	74.75	59.75	37.75	96.25	73.20	.....	.....
20	97.55	75.80	60.20	38.80	97.15	74.60	59.80	37.60	96.25	73.20	.....	.....
21	97.45	75.80	60.10	38.80	97.10	74.52	59.75	37.52	96.25	73.20	.....	.....
22	97.43	75.80	60.08	38.80	97.12	74.40	59.77	37.40	96.25	73.20	.....	.....
23	97.30	75.70	59.95	38.70	97.00	74.24	59.65	37.24	96.25	73.20	.....	.....
24	97.25	75.70	59.90	38.70	96.85	74.25	59.50	37.25	96.25	73.20	.....	.....
25	97.10	75.60	59.75	38.60	96.90	74.25	59.55	37.25	96.25	73.20	.....	.....
26	c97.80	75.45	.....	38.45	96.90	74.28	59.55	37.28	96.25	73.20	.....	.....
27	97.38	75.52	60.03	38.52	97.10	74.28	59.75	37.28	96.25	73.20	.....	.....
28	97.28	75.58	59.93	38.58	97.12	74.08	59.77	37.08	96.25	73.20	.....	.....
29	97.28	75.55	59.93	38.55	97.12	74.20	59.77	37.20	96.25	73.20	.....	.....
30	97.20	75.52	59.85	38.52	97.00	74.00	59.65	37.00	96.25	73.20	.....	.....
31	97.30	75.50	59.95	38.50	.....	.....	.....	.....	96.25	73.20	.....	.....

* Last reading taken Dec. 7, 1908. [On account of rapid drop from Dec. 4 to 7 the readings for this period are also considered unreliable. Reductions for tail water and fore bay levels are omitted from Dec. 5 to Feb. 24, inclusive. Engrs.]

c Record unreliable.

TABLE 10—Continued

WATER LEVELS—LAKE OF THE WOODS—KENORA, ONTARIO

RECORDS OF KENORA MUNICIPAL POWER PLANT

1909	JANUARY				FEBRUARY				MARCH			
	Local Datum		Sea-level Datum		Local Datum		Sea-level Datum		Local Datum		Sea-level Datum	
	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race
1					96.25	73.20			†			
2					96.25	73.20						
3					96.25	73.20						
4					96.25	73.20						
5					96.25	72.20						
6					96.25	72.20			96.00	‡	1058.65	
7	96.25	73.20			96.25	73.20			96.00		58.65	
8	96.25	73.20			96.25	73.20			96.00		58.65	
9	96.25	73.20			96.25	73.20			96.00		58.65	
10	96.25	73.20			96.25	73.20			96.00		58.65	
11	96.25	73.20			96.25	73.20			96.00		58.65	
12	96.25	73.20			96.25	73.20			95.80		58.45	
13	96.25	73.20			96.25	73.20			95.80		58.45	
14	96.25	73.20			96.25	73.20			95.80		58.45	
15	96.25	73.20			96.25	73.20			95.80		58.45	
16	96.25	73.20			96.25	73.20			95.80		58.45	
17	96.25	73.20			96.25	73.20			95.80		58.45	
18	96.25	73.20			96.25	73.20			95.60		58.25	
19	96.25	73.20			96.25	73.20			95.60		58.25	
20	96.25	73.20			96.25	73.20			95.60		58.25	
21	96.25	73.20			96.25	73.20			95.60		58.25	
22	96.25	73.20			96.25	73.20			95.60		58.25	
23	96.25	73.20			96.25	73.20			95.60		58.25	
24	96.25	73.20			96.25	73.20			95.60		58.25	
25	96.25	73.20			*				95.60		58.25	
26	96.25	73.20							95.60		58.25	
27	96.25	73.20							c98.50			
28	96.25	73.20							c96.50			
29	96.25	73.20							95.50		58.15	
30	96.25	73.20							95.50		58.15	
31	96.25	73.20							95.72		58.37	

1909	APRIL				MAY				JUNE			
1	95.75		1058.40		95.35	74.45	1058.00	1037.45	96.30	74.30	1058.95	1037.30
2	95.74		58.39		95.38	73.90	58.03	36.90	96.30	74.35	58.95	37.35
3	95.80	73.30	58.45	1036.30	95.40	74.05	58.05	37.05	96.40	74.45	59.05	37.45
4	96.10	73.70	58.75	36.70	95.41	74.38	58.06	37.38	96.20	74.30	58.85	37.30
5	95.80	74.20	58.45	37.20	95.48	74.15	58.13	37.15	96.20	74.45	58.85	37.45
6	95.70	74.30	58.35	37.30	95.35	74.50	58.00	37.50	96.50	73.82	59.15	36.82
7	95.70	74.30	58.35	37.30	95.52	74.50	58.17	37.50	96.32	74.25	58.97	37.25
8	95.67	74.38	58.32	37.38	95.95	74.01	58.60	37.01	96.38	74.35	59.03	37.35
9	95.70	74.20	58.35	37.20	95.98	74.00	58.63	37.00	96.32	74.31	58.97	37.31
10	96.00	73.85	58.65	36.85	95.61	74.22	58.26	37.22	96.28	74.32	58.93	37.32
11	96.00	73.80	58.65	36.80	95.58	74.41	58.23	37.41	96.35	74.35	59.00	37.35
12	95.60	74.25	58.25	37.25	95.59	74.42	58.24	37.42	96.41	74.32	59.06	37.32
13	95.50	74.35	58.15	37.35	95.72	74.45	58.37	37.45	96.40	73.80	59.05	36.80
14	95.50	74.40	58.15	37.40	95.81	74.45	58.46	37.45	96.32	74.21	58.97	37.21
15	95.58	74.38	58.23	37.38	95.90	74.45	58.55	37.45	96.42	74.31	59.07	37.31
16	95.52	74.30	58.17	37.30	96.26	74.00	58.91	37.00	96.31	74.35	58.96	37.35
17	95.65	74.25	58.30	37.25	96.00	74.25	58.65	37.25	96.30	74.32	58.95	37.32
18	96.00	73.65	58.65	36.65	96.05	74.40	58.70	37.40	96.38	74.34	59.03	37.34
19	95.55	74.05	58.20	37.05	96.10	74.50	58.75	37.50	96.50	74.23	59.15	37.23
20	95.50	74.25	58.15	37.25	96.18	74.50	58.83	37.50	96.70	73.72	59.35	36.72
21	95.51	74.35	58.16	37.35	96.20	74.50	58.85	37.50	96.64	74.30	59.29	37.30
22	95.40	74.43	58.05	37.43	96.25	74.55	58.90	37.55	96.89	74.21	59.54	37.21
23	95.45	74.40	58.10	37.40	96.50	74.10	59.15	37.10	96.71	74.40	59.36	37.40
24	95.42	74.50	58.07	37.50	96.50	73.92	59.15	36.92	96.60	74.40	59.25	37.40
25	95.90	73.90	58.55	36.90	96.25	74.25	58.90	37.25	96.50	74.40	59.15	37.40
26	95.40	74.15	58.05	37.15	96.30	74.30	58.95	37.30	96.55	74.45	59.20	37.45
27	95.40	74.40	58.05	37.40	96.25	74.45	58.90	37.45	96.70	73.80	59.35	36.80
28	95.38	74.30	58.03	37.30	96.30	74.40	58.95	37.40	96.60	74.21	59.25	37.21
29	95.38	74.38	58.03	37.38	96.30	74.45	58.95	37.45	96.77	74.30	59.42	37.30
30	95.30	74.40	57.95	37.40	96.50	73.91	59.15	36.91	96.52	74.45	59.17	37.45
31					96.30	74.20	58.95	37.20				

* Frozen to bottom. † Ice in bays. ‡ Solid ice. c Record unreliable.

TABLE 10—Continued

WATER LEVELS—LAKE OF THE WOODS—KENORA, ONTARIO

RECORDS OF KENORA MUNICIPAL POWER PLANT

1909	July				August				September			
	Local Datum		Sea-level Datum		Local Datum		Sea-level Datum		Local Datum		Sea-level Datum	
	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race
1	96.85	74.05	1059.50	1037.05	97.00	73.85	1059.65	1036.85	97.30	74.00	1059.95	1037.00
2	96.50	74.30	59.15	37.30	97.00	73.85	59.65	36.85	97.30	74.00	59.95	37.00
3	96.62	74.30	59.27	37.30	96.80	74.31	59.45	37.31	97.00	74.00	59.65	37.00
4	96.92	73.85	59.57	36.85	96.90	74.42	59.55	37.42	97.20	74.05	59.85	37.05
5	96.70	74.30	59.35	37.30	96.79	74.45	59.44	37.45	97.30	74.10	59.95	37.10
6	96.62	74.36	59.27	37.36	96.83	74.42	59.48	37.42	96.95	73.95	59.60	36.95
7	96.75	74.40	59.40	37.40	96.80	74.51	59.45	37.51	97.30	74.10	59.95	37.10
8	96.90	74.48	59.55	37.48	97.00	74.00	59.65	37.00	96.90	74.10	59.55	37.10
9	97.04	74.45	59.69	37.45	96.90	74.25	59.55	37.25	97.02	74.50	59.67	37.50
10	96.60	74.55	59.25	37.55	96.90	74.35	59.55	37.35	96.70	74.30	59.35	37.30
11	96.97	74.10	59.62	37.10	97.00	74.00	59.65	37.00	97.00	74.30	59.65	37.30
12	96.90	c73.00	59.55	.....	96.90	74.30	59.55	37.30	97.10	74.10	59.75	37.10
13	96.70	74.31	59.35	37.31	97.15	74.00	59.80	37.00	97.00	74.00	59.65	37.00
14	.....	.....	.....	.....	97.10	74.10	59.75	37.10	97.03	74.20	59.68	37.20
15	.....	.....	.....	.....	97.10	74.10	59.75	37.10	96.82	74.40	59.47	37.40
16	96.62	74.45	59.27	37.45	96.90	74.20	59.55	37.20	c97.83	74.50	.....	37.50
17	96.70	74.50	59.35	37.50	97.00	74.35	59.65	37.35	97.00	74.50	59.65	37.50
18	96.92	74.00	59.57	37.00	96.95	74.40	59.60	37.40	97.18	74.40	59.83	37.40
19	96.90	74.30	59.55	37.30	96.82	74.50	59.47	37.50	97.28	74.12	59.93	37.12
20	96.70	74.35	59.35	37.35	97.12	74.00	59.77	37.00	97.20	74.10	59.85	37.10
21	96.70	74.42	59.35	37.42	97.50	74.00	60.15	37.00	97.00	74.40	59.65	37.40
22	96.80	74.00	59.45	37.00	97.20	73.90	59.85	36.90	96.80	74.50	59.45	37.50
23	96.89	74.00	59.54	37.00	97.30	73.90	59.95	36.90	96.90	74.50	59.55	37.50
24	96.80	74.25	59.45	37.25	97.00	74.00	59.65	37.00	96.92	74.60	59.57	37.60
25	97.08	73.70	59.73	36.70	97.22	74.00	59.87	37.00	96.98	74.68	59.63	37.68
26	96.81	74.10	59.46	37.10	97.20	74.00	59.85	37.00	97.32	74.22	59.97	37.22
27	96.80	74.32	59.45	37.32	97.42	74.00	60.07	37.00	97.30	74.10	59.95	37.10
28	96.89	74.40	59.54	37.40	97.11	74.20	59.76	37.20	96.80	74.58	59.45	37.58
29	96.89	74.02	59.54	37.02	97.11	74.05	59.76	37.05	96.78	74.68	59.43	37.68
30	97.00	74.00	59.65	37.00	97.30	74.00	59.95	37.00	96.89	74.68	59.54	37.68
31	96.95	74.00	59.60	37.00	97.20	74.00	59.85	37.00	.....	.....	.....	.....

1909	October				November				December			
1	96.90	74.67	1059.55	1037.67	97.25	74.62	1059.90	1037.62	97.20	74.71	1059.85	1037.71
2	96.98	74.68	59.63	37.68	97.28	74.60	59.93	37.60	97.20	74.71	59.85	37.71
3	97.10	74.10	59.75	37.10	97.28	74.80	59.93	37.80	97.21	74.80	59.86	37.80
4	97.10	74.02	59.75	37.02	97.28	74.79	59.93	37.79	97.27	74.78	59.92	37.78
5	97.10	74.50	59.75	37.50	97.23	74.80	59.88	37.80	97.45	74.40	60.10	37.40
6	96.98	74.60	59.63	37.60	97.30	74.82	59.95	37.82	97.42	74.70	60.07	37.70
7	96.96	74.62	59.61	37.62	97.40	74.27	60.05	37.27	97.40	74.80	60.05	37.80
8	97.20	74.60	59.85	37.60	97.26	74.60	59.91	37.60	97.20	74.40	59.85	37.40
9	96.73	74.68	59.38	37.68	97.60	74.90	60.25	37.90	97.30	74.40	59.95	37.40
10	96.90	74.20	59.55	37.20	97.37	74.70	60.02	37.70	97.20	74.40	59.85	37.40
11	96.48	74.10	59.13	37.10	97.28	74.80	59.93	37.80	97.40	74.20	60.05	37.20
12	96.47	74.60	59.12	37.60	97.18	74.78	59.83	37.78	.....	.....	.....	.....
13	96.70	74.60	59.35	37.60	97.20	74.50	59.85	37.50	97.40	74.60	60.05	37.60
14	96.78	74.60	59.43	37.60	96.60	74.20	59.25	37.20	97.48	74.40	60.13	37.40
15	96.78	74.60	59.43	37.60	97.20	74.55	59.85	37.55	97.58	74.58	60.23	37.58
16	96.89	74.68	59.54	37.68	97.27	74.68	59.92	37.68	97.50	74.78	60.15	37.78
17	97.10	74.13	59.75	37.13	97.28	74.70	59.93	37.70	97.57	74.70	60.22	37.70
18	97.10	74.11	59.75	37.11	97.40	74.67	60.05	37.67	97.48	74.80	60.13	37.80
19	97.10	74.60	59.75	37.60	97.38	74.79	60.03	37.79	.....	.....	.....	.....
20	97.10	74.69	59.75	37.69	97.25	74.60	59.90	37.60	97.60	74.68	60.25	37.68
21	96.90	74.70	59.55	37.70	97.35	74.40	60.00	37.40	97.60	74.69	60.25	37.69
22	97.02	74.71	59.67	37.71	97.17	74.52	59.82	37.52	97.60	74.79	60.25	37.79
23	97.20	74.68	59.85	37.68	97.20	74.48	59.85	37.48	97.67	74.80	60.32	37.80
24	97.70	74.23	60.35	37.23	97.20	74.40	59.85	37.40	97.63	74.82	60.28	37.82
25	97.32	74.52	59.97	37.52	97.20	74.71	59.85	37.71	97.80	74.40	60.45	37.40
26	96.90	74.70	59.55	37.70	97.00	74.80	59.65	37.80	97.81	74.43	60.46	37.43
27	97.00	74.78	59.65	37.78	97.20	74.81	59.85	37.81	97.65	74.67	60.30	37.67
28	97.40	74.70	60.05	37.70	97.40	74.30	60.05	37.30	97.65	74.80	60.30	37.80
29	97.40	74.70	60.05	37.70	97.32	74.50	59.97	37.50	97.70	74.73	60.35	37.73
30	97.10	74.80	59.75	37.80	97.27	74.65	59.92	37.65	97.62	74.70	60.27	37.70
31	97.40	74.28	60.05	37.28	.....	.....	.....	.....	97.70	74.70	60.35	37.70

c Record unreliable.

TABLE 10—Continued

WATER LEVELS—LAKE OF THE WOODS—KENORA, ONTARIO

RECORDS OF KENORA MUNICIPAL POWER PLANT

1910	January				February				March			
	Local Datum		Sea-level Datum		Local Datum		Sea-level Datum		Local Datum		Sea-level Datum	
	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race
1	97.80	74.60	1060.45	1037.60	97.85	.....	1060.50	.....	97.80	.....	1060.45	.....
2	97.80	74.40	60.45	37.40	97.88	.....	60.53	.....	97.80	.....	60.45	.....
3	97.70	74.69	60.35	37.69	97.90	.....	60.55	.....	98.00	.....	60.65	.....
4	97.80	74.60	60.45	37.60	97.88	.....	60.53	.....	98.00	.....	60.65	.....
5	97.80	74.80	60.45	37.80	97.87	.....	60.52	.....	98.00	.....	60.65	.....
6	97.78	74.78	60.43	37.78	98.00	.....	60.65	.....	98.15	.....	60.80	.....
7	97.88	74.65	60.53	37.65	97.87	.....	60.52	.....	98.02	.....	60.67	.....
8	97.77	74.78	60.42	37.78	98.00	.....	60.65	.....	98.02	.....	60.67	.....
9	.....	.....	.....	.....	97.82	.....	60.47	.....	98.00	.....	60.65	.....
10	97.80	74.70	60.45	37.70	97.80	.....	60.45	.....	98.01	.....	60.66	.....
11	97.82	74.70	60.47	37.70	97.80	.....	60.45	.....	97.81	.....	60.46	.....
12	97.80	74.85	60.45	37.85	97.80	.....	60.45	.....	97.80	.....	60.45	.....
13	97.80	74.90	60.45	37.90	98.00	.....	60.65	.....	98.02	.....	60.67	.....
14	97.88	74.85	60.53	37.85	97.81	.....	60.46	.....	98.01	.....	60.66	.....
15	97.90	74.55	60.55	37.55	97.82	.....	60.47	.....	98.05	.....	60.70	.....
16	97.93	74.50	60.58	37.50	98.00	.....	60.65	.....	97.80	.....	60.45	.....
17	97.80	.....	60.45	.....	97.80	.....	60.45	.....	97.88	.....	60.53	.....
18	97.80	.....	60.45	.....	97.80	.....	60.45	.....	97.90	.....	60.55	.....
19	97.80	.....	60.45	.....	97.80	.....	60.45	.....	97.90	.....	60.55	.....
20	97.80	.....	60.45	.....	98.10	.....	60.75	.....	98.05	.....	60.70	.....
21	97.80	.....	60.45	.....	97.80	.....	60.45	.....	98.00	.....	60.65	.....
22	97.90	.....	60.55	.....	97.80	.....	60.45	.....	97.95	74.85	60.60	1037.85
23	c98.98	.....	.....	.....	97.80	.....	60.45	.....	98.20	74.65	60.85	37.65
24	97.81	.....	60.46	.....	97.80	.....	60.45	.....	98.20	74.65	60.85	37.65
25	97.80	.....	60.45	.....	97.80	.....	60.45	.....	98.00	74.95	60.65	37.95
26	97.80	.....	60.45	.....	98.00	.....	60.65	.....	98.00	75.02	60.65	38.02
27	97.80	.....	60.45	.....	98.00	.....	60.65	.....	98.20	75.60	60.85	38.60
28	97.82	.....	60.47	.....	97.80	.....	60.45	.....	98.20	74.72	60.85	37.72
29	97.81	.....	60.46	.....	.....	.....	.....	.....	98.10	75.10	60.75	38.10
30	98.00	.....	60.65	.....	.....	.....	.....	.....	98.20	75.30	60.85	38.30
31	97.90	.....	60.55	.....	.....	.....	.....	.....	98.30	75.70	60.95	38.70

1910	April				May				June			
1	98.33	76.60	1060.98	1039.60	98.68	79.88	1061.33	1042.88	97.90	79.35	1060.55	1042.35
2	98.30	77.45	60.95	40.45	98.60	79.80	61.25	42.80	97.88	79.38	60.53	42.38
3	98.49	77.70	61.14	40.70	98.70	79.95	61.35	42.95	98.10	79.40	60.75	42.40
4	98.35	78.00	61.00	41.00	98.70	79.99	61.35	42.99	98.20	79.50	60.85	42.50
5	98.40	78.35	61.05	41.35	98.65	80.05	61.30	43.05	98.30	79.40	60.95	42.40
6	98.40	78.40	61.05	41.40	98.60	80.00	61.25	43.00	98.00	79.30	60.65	42.30
7	98.41	78.60	61.06	41.60	98.74	79.98	61.39	42.98	98.00	79.33	60.65	42.33
8	98.40	78.60	61.05	41.60	98.90	79.90	61.55	42.90	98.00	79.35	60.65	42.35
9	98.40	78.75	61.05	41.75	98.54	79.82	61.19	42.82	97.98	79.20	60.63	42.20
10	98.50	78.45	61.15	41.45	98.40	79.85	61.05	42.85	97.93	78.95	60.58	41.95
11	98.20	78.60	60.85	41.60	98.37	79.85	61.02	42.85	98.00	78.60	60.65	41.60
12	98.47	78.78	61.12	41.78	98.38	79.88	61.03	42.88	98.16	78.30	60.81	41.30
13	98.43	78.90	61.08	41.90	98.42	79.89	61.07	42.89	98.02	78.20	60.67	41.20
14	98.40	78.90	61.05	41.90	98.70	79.80	61.35	42.80	98.00	78.20	60.65	41.20
15	98.40	78.98	61.05	41.98	98.66	79.73	61.31	42.73	98.02	78.18	60.67	41.18
16	98.55	78.99	61.20	41.99	98.50	79.73	61.15	42.73	97.93	78.18	60.58	41.18
17	98.13	78.90	60.78	41.90	98.20	79.80	60.85	42.80	97.90	78.10	60.55	41.10
18	98.30	78.82	60.95	41.82	98.45	79.69	61.10	42.69	98.00	78.03	60.65	41.03
19	98.60	79.10	61.25	42.10	98.50	79.73	61.15	42.73	98.00	78.03	60.65	41.03
20	98.60	79.22	61.25	42.22	98.20	79.80	60.85	42.80	98.00	c77.08	60.65	.....
21	98.85	79.30	61.50	42.30	98.40	79.69	61.05	42.69	98.00	78.00	60.65	41.00
22	98.32	79.25	60.97	42.25	98.52	79.60	61.17	42.60	98.00	78.00	60.65	41.00
23	98.12	79.20	60.77	42.20	98.30	79.60	60.95	42.60	97.90	78.00	60.55	41.00
24	98.72	79.10	61.37	42.10	98.21	79.55	60.86	42.55	98.00	78.00	60.65	41.00
25	98.74	79.08	61.39	42.08	98.21	79.60	60.86	42.60	97.90	77.90	60.55	40.90
26	98.72	79.32	61.37	42.32	98.22	79.65	60.87	42.65	97.90	77.90	60.55	40.90
27	98.52	79.52	61.17	42.52	98.43	79.65	61.08	42.65	97.90	77.70	60.55	40.70
28	98.71	79.72	61.36	42.72	98.41	79.61	61.06	42.61	97.80	77.80	60.45	40.80
29	98.69	79.85	61.34	42.85	98.30	79.60	60.95	42.60	97.90	77.90	60.55	40.90
30	98.69	79.92	61.34	42.92	98.20	79.35	60.85	42.35	97.90	77.90	60.55	40.90
31	.....	.....	.....	.....	98.10	79.52	60.75	42.52	.....	.....	.....	.....

c Record unreliable.

TABLE 10—Continued

WATER LEVELS—LAKE OF THE WOODS—KENORA, ONTARIO

RECORDS OF KENORA MUNICIPAL POWER PLANT

1910	July				August				September			
	Local Datum		Sea-level Datum		Local Datum		Sea-level Datum		Local Datum		Sea-level Datum	
	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race
1	97.90	77.60	1060.55	1040.60	96.83	74.30	1059.48	1037.30	96.40	73.50	1059.05	1036.50
2	97.56	77.60	60.21	40.60	96.98	74.38	59.63	37.38	96.40	73.50	59.05	36.50
3	97.60	77.50	60.25	40.50	96.80	74.38	59.45	37.38	.....	.....	.....	.....
4	97.40	77.48	60.05	40.48	96.62	74.45	59.27	37.45	96.50	73.35	59.15	36.35
5	97.67	77.60	60.32	40.60	96.73	74.45	59.38	37.45	96.49	73.30	59.14	36.30
6	97.42	77.70	60.07	40.70	96.73	74.45	59.38	37.45	96.48	73.50	59.13	36.50
7	97.47	77.69	60.12	40.69	97.05	74.20	59.70	37.20	96.23	73.75	58.88	36.75
8	97.40	77.67	60.05	40.67	96.71	74.30	59.36	37.30	96.00	74.00	58.65	37.00
9	97.35	77.50	60.00	40.50	96.52	74.40	59.17	37.40	96.15	73.90	58.80	36.90
10	97.50	77.00	60.15	40.00	96.68	74.45	59.33	37.45	96.50	73.98	59.15	36.98
11	97.30	76.90	59.95	39.90	96.79	74.35	59.44	37.35	96.10	73.40	58.75	36.40
12	97.30	76.90	59.95	39.90	96.89	74.20	59.54	37.20	96.20	74.00	58.85	37.00
13	97.29	76.25	59.94	39.25	96.62	74.10	59.27	37.10	96.12	74.20	58.77	37.20
14	97.40	77.10	60.05	40.10	96.80	73.80	59.45	36.80	96.20	73.60	58.85	36.60
15	97.32	76.05	59.97	39.05	96.90	73.70	59.55	36.70	96.20	74.00	58.85	37.00
16	97.20	75.78	59.85	38.78	96.80	73.80	59.45	36.80	96.15	74.04	58.80	37.04
17	97.31	75.60	59.96	38.60	96.78	73.80	59.43	36.80	95.80	74.00	58.45	37.00
18	97.32	75.58	59.97	38.58	96.73	73.82	59.38	36.82	96.20	73.50	58.85	36.50
19	.....	.....	.....	.....	96.75	74.10	59.40	37.10	95.90	73.90	58.55	36.90
20	.....	.....	.....	.....	96.73	74.10	59.38	37.10	95.87	74.00	58.52	37.00
21	97.10	75.50	59.75	38.50	96.79	73.75	59.44	36.75	95.75	74.10	58.40	37.10
22	97.00	75.30	59.65	38.30	96.42	74.10	59.07	37.10	95.97	74.20	58.62	37.20
23	97.20	75.00	59.85	38.00	96.50	74.05	59.15	37.05	95.90	74.12	58.55	37.12
24	97.20	74.60	59.85	37.60	96.22	74.05	58.87	37.05	95.90	74.40	58.55	37.40
25	97.05	74.60	59.70	37.60	96.30	74.05	58.95	37.05	95.90	73.60	58.55	36.60
26	96.90	74.60	59.55	37.60	96.50	74.02	59.15	37.02	95.80	73.95	58.45	36.95
27	96.90	74.65	59.55	37.65	96.20	74.00	58.85	37.00	96.00	74.10	58.65	37.10
28	96.90	74.60	59.55	37.60	96.50	73.55	59.15	36.55	96.00	74.20	58.65	37.20
29	96.86	74.60	59.51	37.60	96.40	73.80	59.05	36.80	96.03	74.20	58.68	37.20
30	96.86	74.60	59.51	37.60	97.05	73.95	59.70	36.95	96.00	74.18	58.65	37.18
31	97.00	74.20	59.65	37.20	96.48	73.50	59.13	36.50	.....	.....	.....	.....

1910	October				November				December			
1	95.90	74.30	1058.55	1037.30	95.47	74.03	1058.12	1037.03	.....	.....	.....	.....
2	96.10	73.60	58.75	36.60	95.30	74.15	57.95	37.15	95.30	75.00	1057.95	1037.90
3	96.00	73.87	58.65	36.87	95.70	74.90	58.35	37.90	95.30	75.00	57.95	37.90
4	96.13	74.20	58.78	37.20	95.80	74.20	58.45	37.20	95.40	74.31	58.05	37.21
5	96.20	74.30	58.85	37.30	95.30	74.99	57.95	37.99	95.30	74.90	57.95	37.80
6	95.85	74.25	58.50	37.25	95.60	73.40	58.25	36.40	95.30	74.90	57.95	37.80
7	95.90	74.20	58.55	37.20	95.30	74.89	57.95	37.89	95.30	74.90	57.95	37.80
8	95.80	74.35	58.45	37.35	95.48	74.99	58.13	37.99	95.26	74.92	57.91	37.82
9	96.00	73.75	58.65	36.75	95.38	74.99	58.03	37.99	95.23	75.10	57.88	38.00
10	95.88	73.82	58.53	36.82	95.32	74.99	57.97	37.99	95.30	74.90	57.95	37.80
11	95.60	74.25	58.25	37.25	95.37	74.98	58.02	37.98	95.40	74.30	58.05	37.20
12	95.48	.....	58.13	.....	95.33	74.95	57.98	37.95	95.25	.....	57.90	.....
13	95.70	74.40	58.35	37.40	95.50	74.10	58.15	37.10	95.30	75.00	57.95	37.90
14	95.70	74.40	58.35	37.40	95.22	74.97	57.87	37.97	95.22	75.01	57.87	37.91
15	95.85	74.20	58.50	37.20	95.32	74.95	57.97	37.95	95.20	75.02	57.85	37.92
16	95.85	73.60	58.50	36.60	95.40	75.00	58.05	38.00	95.20	75.00	57.85	37.90
17	95.68	73.82	58.33	36.82	95.38	75.00	58.03	38.00	95.21	75.00	57.86	37.90
18	95.63	74.02	58.28	37.02	95.40	75.00	58.05	38.00	95.40	74.20	58.05	37.10
19	95.00	74.40	57.65	37.40	95.40	75.00	58.05	38.00	95.20	74.93	57.85	37.83
20	95.60	74.30	58.25	37.30	95.48	74.30	58.13	37.30	95.20	74.93	57.85	37.83
21	.....	.....	.....	.....	95.30	74.90	57.95	37.90	95.18	75.02	57.83	37.92
22	.....	.....	.....	.....	95.40	74.01	58.05	37.01	95.20	75.00	57.85	37.90
23	.....	.....	.....	.....	95.40	75.00	58.05	38.00	95.11	75.02	57.76	37.92
24	.....	.....	.....	.....	95.39	74.90	58.04	37.90	95.10	75.02	57.75	37.92
25	95.78	74.10	58.43	37.10	95.40	75.00	58.05	38.00	95.21	74.50	57.86	37.40
26	95.60	74.16	58.25	37.16	95.30	74.92	57.95	37.92	95.21	74.50	57.86	37.40
27	95.40	73.98	58.05	36.98	95.49	74.28	58.14	37.28	95.18	74.81	57.83	37.71
28	95.39	74.21	58.04	37.21	95.38	74.92	58.03	37.92	95.09	75.91	57.74	37.81
29	95.88	74.12	58.53	37.12	95.38	74.92	58.03	37.92	95.03	74.90	57.68	37.80
30	95.70	73.70	58.35	36.70	95.32	74.98	57.97	37.98	95.01	74.93	57.66	37.83
31	95.53	73.55	58.18	36.55	.....	.....	.....	.....	95.07	74.90	57.72	37.80

TABLE 10—Continued

WATER LEVELS—LAKE OF THE WOODS—KENORA, ONTARIO

RECORDS OF KENORA MUNICIPAL POWER PLANT

1911	JANUARY				FEBRUARY				MARCH			
	Local Datum		Sea-level Datum		Local Datum		Sea-level Datum		Local Datum		Sea-level Datum	
	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race
1	95.20	74.45	1057.85	1037.35	94.85	74.88	1057.50	1037.78	94.81	74.88	1057.46	1037.78
2	95.00	74.60	57.65	37.50	94.85	74.88	57.50	37.78	94.81	74.88	57.46	37.78
3	95.00	74.60	57.65	37.50	94.85	74.88	57.50	37.78	94.81	74.89	57.46	37.79
4	95.00	74.60	57.65	37.50	94.85	74.88	57.50	37.78	94.81	74.90	57.46	37.80
5	95.00	74.60	57.65	37.50	94.88	74.50	57.53	37.40	94.83	74.33	57.48	37.23
6	95.00	74.60	57.65	37.50	94.85	74.88	57.50	37.78	94.82	74.30	57.47	37.20
7	95.00	74.60	57.65	37.50	94.85	74.89	57.50	37.79	94.81	74.85	57.46	37.75
8	95.25	74.35	57.90	37.25	94.85	74.89	57.50	37.79	94.82	74.85	57.47	37.75
9	94.90	74.85	57.55	37.75	94.82	74.90	57.47	37.80	94.82	74.88	57.47	37.78
10	94.90	74.85	57.55	37.75	94.82	74.89	57.47	37.79	94.83	74.29	57.48	37.19
11	94.90	74.85	57.55	37.75	94.82	74.90	57.47	37.80	94.70	74.10	57.35	37.00
12	94.90	74.85	57.55	37.75	94.85	74.02	57.50	36.92	94.71	74.10	57.36	37.00
13	94.90	74.85	57.55	37.75	94.80	74.80	57.45	37.70	94.70	74.75	57.35	37.65
14	94.90	74.85	57.55	37.75	94.85	74.95	57.50	37.85	94.70	74.85	57.35	37.75
15	95.10	74.25	57.75	37.15	94.85	74.95	57.50	37.85	94.70	74.85	57.35	37.75
16	94.90	74.85	57.55	37.75	94.86	74.89	57.51	37.79	94.70	74.85	57.35	37.75
17	94.90	74.85	57.55	37.75	94.84	74.89	57.49	37.79	94.70	74.89	57.35	37.79
18	94.85	74.88	57.50	37.78	94.85	74.89	57.50	37.79	94.70	74.89	57.35	37.79
19	94.85	74.88	57.50	37.78	94.86	74.40	57.51	37.30	94.70	74.90	57.35	37.80
20	94.85	74.88	57.50	37.78	94.83	74.91	57.48	37.81	94.70	73.88	57.35	36.78
21	94.85	74.88	57.50	37.78	94.84	74.90	57.49	37.80	94.20	74.82	56.85	37.72
22	94.97	74.30	57.62	37.20	94.83	74.90	57.48	37.80	94.20	74.88	56.85	37.78
23	94.85	74.88	57.50	37.78	94.80	74.92	57.45	37.82	94.20	74.89	56.85	37.79
24	94.85	74.88	57.50	37.78	94.81	74.89	57.46	37.79	94.18	74.80	56.83	37.70
25	94.85	74.88	57.50	37.78	94.81	74.82	57.46	37.72	94.18	74.80	56.83	37.70
26	94.85	.....	57.50	.....	94.85	c75.40	57.50	.....	94.25	73.85	56.90	36.75
27	94.85	.....	57.50	.....	94.80	74.89	57.45	37.79	94.18	74.85	56.83	37.75
28	94.85	.....	57.50	.....	94.80	74.89	57.45	37.79	94.18	74.85	56.83	37.75
29	94.86	74.25	57.51	37.15	.....	.....	.....	.....	94.18	74.82	56.83	37.72
30	94.86	74.25	57.51	37.15	.....	.....	.....	.....	94.20	74.08	56.85	36.98
31	94.85	74.88	57.50	37.78	.....	.....	.....	.....	94.20	74.10	56.85	37.00

1911	APRIL				MAY				JUNE			
1	94.20	74.10	1056.85	1037.00	94.17	74.10	1056.82	1037.00	94.25	74.80	1056.90	1037.70
2	94.20	c72.82	56.85	.....	94.08	74.85	56.73	37.75	94.05	74.71	56.70	37.61
3	94.20	74.15	56.85	37.05	94.17	74.85	56.82	37.75	94.22	74.80	56.87	37.70
4	94.00	74.85	56.65	37.75	94.19	74.82	56.84	37.72	.....	.....	.....	.....
5	94.00	74.86	56.65	37.76	94.28	74.95	56.93	37.85	94.41	74.68	57.06	37.58
6	94.00	74.89	56.65	37.79	94.29	74.81	56.94	37.71	94.52	74.72	57.17	37.62
7	94.00	74.85	56.65	37.75	94.46	c73.11	57.11	.....	94.40	74.78	57.05	37.68
8	94.00	74.85	56.65	37.75	94.27	74.92	56.92	37.82	94.38	74.75	57.03	37.65
9	94.02	73.62	56.67	36.52	94.04	74.83	56.69	37.73	94.42	74.79	57.07	37.69
10	94.00	74.75	56.65	37.65	94.10	74.79	56.75	37.69	94.46	74.15	57.11	37.05
11	93.98	74.89	56.63	37.79	94.70	74.83	57.35	37.73	.....	.....	.....	.....
12	93.98	74.88	56.63	37.78	94.16	74.82	56.81	37.72	.....	.....	.....	.....
13	94.00	74.89	56.65	37.79	94.35	74.92	57.00	37.82	.....	.....	.....	.....
14	94.00	73.89	56.65	36.79	.....	.....	.....	.....	94.51	74.80	57.16	37.70
15	94.00	74.82	56.65	37.72	.....	.....	.....	.....	94.65	74.78	57.30	37.68
16	94.20	74.26	56.85	37.16	.....	.....	.....	.....	94.54	74.83	57.19	37.73
17	94.00	74.18	56.65	37.08	.....	.....	.....	.....	94.58	74.83	57.23	37.73
18	94.01	74.80	56.66	37.70	.....	.....	.....	.....	94.80	73.90	57.45	36.80
19	94.01	74.81	56.66	37.71	.....	.....	.....	.....	94.84	73.90	57.49	36.80
20	94.20	74.82	56.85	37.72	.....	.....	.....	.....	94.67	73.72	57.32	36.62
21	94.20	74.82	56.85	37.72	.....	.....	.....	.....	94.73	74.70	57.38	37.60
22	94.21	74.88	56.86	37.78	.....	.....	.....	.....	94.70	73.85	57.35	36.75
23	94.31	74.88	56.96	37.78	.....	.....	.....	.....	94.43	74.70	57.08	37.60
24	94.22	74.75	56.87	37.65	.....	.....	.....	.....	94.67	74.80	57.32	37.70
25	94.26	74.80	56.91	37.70	.....	.....	.....	.....	94.81	73.80	57.46	36.70
26	94.27	74.80	56.92	37.70	.....	.....	.....	.....	94.76	74.60	57.41	37.50
27	94.25	74.75	56.90	37.65	94.51	74.77	57.16	37.67	94.17	74.82	56.82	37.72
28	94.28	74.82	56.93	37.72	94.81	73.88	57.46	36.78	94.63	74.75	57.28	37.65
29	94.26	74.81	56.91	37.71	94.22	73.70	56.87	36.60	94.82	73.75	57.47	36.65
30	94.12	74.89	56.77	37.79	94.30	74.80	56.95	37.70	94.54	74.65	57.19	37.55
31	.....	.....	.....	.....	94.31	74.80	56.96	37.70	.....	.....	.....	.....

c Record unreliable.

TABLE 10—Continued

WATER LEVELS—LAKE OF THE WOODS—KENORA, ONTARIO

RECORDS OF KENORA MUNICIPAL POWER PLANT

1911	July				August				September			
	Local Datum		Sea-level Datum		Local Datum		Sea-level Datum		Local Datum		Sea-level Datum	
	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race
1	94.74	73.80	1057.39	1036.70	94.09	73.81	1056.74	1036.71	93.87	74.81	1056.52	1037.71
2	94.81	73.65	57.46	36.55	94.27	73.81	56.92	36.71	93.83	74.69	56.48	37.59
3	94.67	73.99	57.32	36.89	94.27	73.81	56.92	36.71	94.19	73.70	56.84	36.60
4	94.62	73.78	57.27	36.68	94.30	73.80	56.95	36.70	94.10	73.69	56.75	36.59
5	94.62	74.01	57.27	36.91	94.30	73.80	56.95	36.70	93.51	74.66	56.16	37.56
6	94.65	74.05	57.30	36.95	94.40	73.80	57.05	36.70	93.69	74.62	56.34	37.52
7	94.54	74.70	57.19	37.60	94.22	73.80	56.87	36.70	93.81	74.68	56.46	37.58
8	94.68	74.75	57.33	37.65	94.30	73.81	56.95	36.71	93.91	74.70	56.56	37.60
9	94.97	73.90	57.62	36.80	94.17	73.81	56.82	36.71	94.02	74.62	56.67	37.52
10	95.07	74.06	57.72	37.56	94.22	73.80	56.87	36.70	94.08	73.68	56.73	36.58
11	94.61	74.85	57.26	37.75	94.22	73.81	56.87	36.71	93.60	75.05	56.15	37.95
12	94.56	74.10	57.21	37.00	94.37	73.82	57.02	36.72	93.85	75.18	56.50	38.08
13	94.56	74.10	57.21	37.00	94.28	73.71	56.88	36.61	93.80	75.10	56.45	38.00
14	94.47	74.80	57.12	37.70	94.27	73.90	56.92	36.80	93.95	75.10	56.60	38.00
15	94.21	74.85	56.86	37.75	94.18	73.82	56.83	36.72	94.02	75.11	56.67	38.01
16	94.19	73.71	57.14	36.61	94.21	73.90	56.86	36.80	94.00	75.10	56.65	38.00
17	94.38	74.00	57.03	36.90	94.18	73.91	56.83	36.81	94.03	74.21	56.68	37.11
18	94.29	74.71	56.94	37.61	94.27	74.21	56.92	37.11	94.48	75.10	57.13	38.00
19	94.34	74.70	56.99	37.60	94.11	74.79	56.76	37.69	93.92	75.10	56.57	38.00
20	94.35	74.81	57.00	37.71	94.21	73.88	56.86	36.78	93.93	75.13	56.58	38.03
21	94.19	74.80	56.84	37.70	94.30	74.80	56.95	37.70	94.18	74.81	56.83	37.71
22	94.29	74.70	56.94	37.60	93.85	74.82	56.50	37.72	93.73	74.83	56.38	37.73
23	94.16	73.80	56.81	36.70	94.00	74.83	56.65	37.73	c93.10	74.92	.....	37.82
24	94.10	73.85	56.75	36.75	94.09	74.81	56.74	37.71	94.06	73.90	56.71	36.80
25	94.17	73.82	56.82	36.72	94.05	74.80	56.70	37.70	93.82	74.82	56.47	37.72
26	94.11	73.88	56.76	36.78	93.78	74.81	56.43	37.71	94.11	74.81	56.76	37.71
27	94.48	73.88	57.13	36.78	93.84	73.81	56.49	36.71	93.52	74.90	56.17	37.80
28	94.32	73.85	56.97	36.75	93.72	74.79	56.37	37.69	93.82	74.90	56.47	37.80
29	94.30	73.85	56.95	36.75	93.95	74.80	56.60	37.70	93.81	74.81	56.46	37.71
30	94.16	73.75	56.81	36.65	94.25	74.81	56.90	37.71	94.02	74.85	56.67	37.75
31	94.15	73.79	56.80	36.69	93.99	74.81	56.64	37.71	.....	.....	.....	.....

1911	October				November				December			
1	94.09	73.91	1056.74	1036.81	93.62	75.00	1056.27	1037.90	94.08	73.82	1056.73	1036.72
2	93.95	74.83	56.60	37.73	93.88	75.00	56.53	37.90	93.99	73.80	56.64	36.70
3	93.93	74.83	56.58	37.73	94.28	74.99	56.93	37.89	.....	.....	.....	.....
4	93.63	74.85	56.28	37.75	94.07	75.00	56.82	37.90	94.05	73.20	56.70	36.10
5	94.18	74.80	56.83	37.70	94.25	74.10	56.90	37.00	94.06	73.60	56.71	36.50
6	94.03	74.81	56.68	37.71	93.65	74.92	56.30	37.82	94.04	73.60	56.69	36.50
7	94.00	74.90	56.65	37.80	93.87	74.94	56.52	37.84	94.04	73.75	56.69	36.65
8	94.55	73.90	57.20	36.80	93.66	75.00	56.31	37.90	94.09	73.68	56.74	36.58
9	94.20	74.10	56.85	37.00	94.00	75.02	56.65	37.92	94.02	73.60	56.67	36.50
10	94.15	74.70	56.80	37.60	94.15	74.95	56.80	37.85	94.23	72.86	56.88	35.76
11	94.10	74.80	56.75	37.70	93.56	75.10	56.21	38.00	94.32	72.55	56.97	35.45
12	94.05	74.70	56.70	37.60	93.83	74.40	56.48	37.30	94.08	73.70	56.73	36.60
13	94.05	74.80	56.70	37.70	.....	.....	.....	.....	94.08	73.40	56.73	36.30
14	94.05	74.80	56.70	37.70	93.86	74.90	56.51	37.80	94.10	73.50	56.75	36.40
15	94.22	73.85	56.87	36.75	93.92	74.98	56.57	37.88	94.20	73.50	56.85	36.40
16	94.03	74.80	56.68	37.70	93.90	75.00	56.55	37.90	94.08	73.60	56.73	36.50
17	94.00	74.80	56.65	37.70	94.01	74.50	56.69	37.40	94.25	73.20	56.90	36.10
18	94.17	74.75	56.82	37.65	93.94	74.84	56.59	37.74	94.25	72.70	56.90	35.60
19	93.90	74.80	56.55	37.70	94.13	74.28	56.78	37.18	94.15	73.50	56.80	36.40
20	93.88	74.82	56.53	37.72	93.92	74.90	56.57	37.80	94.10	73.60	56.75	36.50
21	94.03	74.90	56.68	37.80	93.92	74.95	56.57	37.85	94.10	73.50	56.75	36.40
22	94.25	73.80	56.90	36.70	93.91	75.00	56.56	37.90	94.15	73.40	56.80	36.30
23	93.80	74.90	56.45	37.80	94.02	74.92	56.67	37.82	94.15	73.60	56.80	36.50
24	93.85	74.85	56.50	37.75	94.00	74.92	56.65	37.82	94.35	72.30	57.00	35.20
25	93.90	74.95	56.55	37.85	94.01	74.85	56.66	37.75	94.30	72.70	56.95	35.60
26	93.95	74.95	56.60	37.85	94.18	74.10	56.83	37.00	94.15	73.20	56.80	36.10
27	93.95	74.90	56.60	37.80	94.05	74.58	56.70	37.48	94.15	73.60	56.80	36.50
28	c94.75	74.85	.....	37.75	93.94	74.92	56.59	37.82	94.08	73.08	56.73	35.98
29	93.97	74.10	56.62	37.00	93.97	75.00	56.62	37.90	94.15	73.70	56.80	36.60
30	93.93	74.83	56.58	37.73	93.95	75.10	56.60	38.00	94.10	73.70	56.75	36.60
31	93.67	74.90	56.32	37.80	.....	.....	.....	.....	94.30	72.50	56.95	35.40

c Record unreliable.

TABLE 10—Continued

WATER LEVELS—LAKE OF THE WOODS—KENORA, ONTARIO

RECORDS OF KENORA MUNICIPAL POWER PLANT

1912	JANUARY				FEBRUARY				MARCH			
	Local Datum		Sea-level Datum		Local Datum		Sea-level Datum		Local Datum		Sea-level Datum	
	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race
1	94.30	73.00	1056.95	1035.90	94.33	74.60	1056.98	1037.50	94.40	74.80	1057.05	1037.70
2	94.25	73.50	56.90	36.40	94.36	74.61	57.01	37.51	94.50	74.80	57.15	37.70
3	94.25	73.50	56.90	36.40	94.37	74.67	57.02	37.57	94.50	74.00	57.15	36.90
4	94.20	73.50	56.85	36.40	94.52	73.84	57.17	36.74	94.40	74.60	57.05	37.50
5	94.30	73.50	56.95	36.40	94.40	74.48	57.05	37.38	94.40	74.80	57.05	37.70
6	94.30	73.00	56.95	35.90	94.39	74.60	57.04	37.50	94.50	74.80	57.15	37.70
7	94.35	72.80	57.00	35.70	94.44	74.60	57.09	37.50	94.40	74.80	57.05	37.70
8	94.15	73.50	56.80	36.40	94.43	74.59	57.08	37.49	94.50	74.80	57.15	37.70
9	94.20	73.50	56.85	36.40	94.35	74.65	57.00	37.55	94.50	74.80	57.15	37.70
10	94.20	73.50	56.85	36.40	94.38	74.65	57.03	37.55	94.60	74.00	57.25	36.90
11	94.20	73.60	56.85	36.50	94.52	73.83	57.17	36.73	94.60	74.10	57.25	37.00
12	94.20	73.50	56.85	36.40	94.50	73.95	57.15	36.85	94.50	74.70	57.15	37.60
13	94.25	73.50	56.90	36.40	94.42	74.60	57.07	37.50	94.40	74.70	57.05	37.60
14	94.30	72.80	56.95	35.70	94.43	74.60	57.08	37.50	94.40	74.70	57.05	37.60
15	94.30	72.83	56.95	35.73	94.48	74.60	57.13	37.50	94.40	74.80	57.05	37.70
16	94.22	74.80	56.87	37.70	94.42	74.52	57.07	37.42	94.42	74.73	57.07	37.63
17	94.27	74.60	56.92	37.50	94.30	74.90	56.95	37.80	94.54	73.86	57.19	36.76
18	94.25	74.75	56.90	37.65	94.60	74.90	57.25	37.80	94.42	74.65	57.07	37.55
19	94.29	74.77	56.94	37.67	94.50	74.30	57.15	37.20	94.42	74.45	57.07	37.35
20	94.30	74.61	56.95	37.51	94.40	c75.80	57.05	.....	94.42	74.75	57.07	37.65
21	94.44	73.95	57.09	36.85	94.50	c75.80	57.15	.....	94.41	74.78	57.06	37.68
22	94.42	74.11	57.07	37.01	94.50	74.30	57.15	37.20	94.47	74.80	57.12	37.70
23	94.34	74.60	56.99	37.50	94.40	74.90	57.05	37.80	94.60	74.02	57.25	36.92
24	94.28	74.61	56.93	37.51	94.40	74.80	57.05	37.70	94.61	73.89	57.26	36.79
25	94.25	74.70	56.90	37.60	94.60	74.10	57.25	37.00	94.47	74.60	57.12	37.50
26	94.26	74.65	56.91	37.55	94.50	74.80	57.15	37.70	94.50	74.80	57.15	37.70
27	94.27	74.64	56.92	37.54	94.40	74.90	57.05	37.80	94.47	74.72	57.12	37.62
28	94.46	73.93	57.11	36.83	94.30	74.90	56.95	37.80	94.50	74.69	57.15	37.59
29	94.42	74.15	57.07	37.05	94.40	74.80	57.05	37.70	94.45	74.70	57.10	37.60
30	94.32	74.61	56.97	37.51	.....	.....	.....	.....	94.44	74.70	57.09	37.60
31	94.36	74.57	57.01	37.47	.....	.....	.....	.....	94.72	73.70	57.37	36.60

1912	APRIL				MAY				JUNE			
1	94.57	74.54	1057.22	1037.44	95.05	74.60	1057.70	1037.50	96.00	74.47	1058.64	1037.37
2	94.52	74.66	57.17	37.56	95.00	74.60	57.65	37.50	96.00	73.46	58.64	36.36
3	94.51	74.69	57.16	37.59	95.02	74.60	57.67	37.50	96.02	73.55	58.66	36.45
4	94.52	74.70	57.17	37.60	95.26	73.50	57.91	36.40	96.02	74.45	58.66	37.35
5	94.52	74.67	57.17	37.57	95.06	74.60	57.71	37.50	96.02	74.46	58.66	37.36
6	94.40	74.80	57.05	37.70	95.19	73.80	57.84	36.70	95.82	74.49	58.46	37.39
7	94.67	73.85	57.32	36.75	95.17	74.59	57.82	37.49	96.07	74.51	58.71	37.41
8	94.50	74.65	57.15	37.55	95.15	74.60	57.80	37.50	96.12	73.52	58.76	36.42
9	94.56	74.71	57.21	37.61	95.40	74.51	58.05	37.41	96.18	73.50	58.82	36.40
10	94.55	74.65	57.20	37.55	95.35	74.52	58.00	37.42	96.30	74.00	58.94	36.90
11	94.48	74.60	57.13	37.50	95.37	74.55	58.02	37.45	95.89	74.02	58.53	36.92
12	94.50	74.65	57.15	37.55	95.50	73.47	58.15	36.37	96.12	73.90	58.76	36.80
13	94.54	74.10	57.19	37.00	95.43	73.60	58.08	36.50	96.10	74.70	58.74	37.60
14	94.67	73.76	57.32	36.66	95.56	74.50	58.21	37.40	96.09	74.70	58.73	37.60
15	94.62	74.55	57.27	37.45	95.40	74.52	58.05	37.42	95.91	74.70	58.55	37.60
16	94.68	74.65	57.33	37.55	95.61	74.50	58.26	37.40	95.91	74.71	58.55	37.61
17	94.68	74.65	57.33	37.55	95.61	74.00	58.26	36.90	95.71	74.71	58.35	37.61
18	94.71	74.65	57.36	37.55	95.40	74.60	58.05	37.50	96.10	74.67	58.74	37.57
19	94.74	74.73	57.39	37.63	95.70	73.52	58.35	36.42	96.00	74.65	58.64	37.55
20	94.72	74.63	57.37	37.53	95.63	73.73	58.28	36.63	95.93	74.70	58.57	37.60
21	94.82	73.52	57.47	36.42	95.60	74.60	58.25	37.50	96.00	74.63	58.64	37.53
22	94.82	73.87	57.47	36.77	95.61	74.61	58.26	37.51	96.10	74.63	58.74	37.53
23	94.74	74.63	57.39	37.53	95.65	74.60	58.30	37.50	96.20	73.70	58.84	36.60
24	94.79	74.49	57.44	37.39	95.72	74.59	58.37	37.49	96.20	74.62	58.84	37.52
25	94.74	74.60	57.39	37.50	95.81	74.60	58.46	37.50	95.99	74.62	58.63	37.52
26	94.82	74.61	57.47	37.51	95.85	73.50	58.50	36.40	96.06	74.68	58.70	37.58
27	94.90	74.69	57.55	37.59	95.82	73.60	58.47	36.50	96.11	74.61	58.75	37.51
28	95.08	73.52	57.73	36.42	95.43	74.50	58.08	37.40	96.12	74.62	58.76	37.52
29	95.03	73.73	57.68	36.63	95.90	74.50	58.55	37.40	96.10	74.57	58.74	37.47
30	95.01	74.63	57.67	37.53	96.00	74.49	58.65	37.39	96.20	c72.52	58.84	.....
31	.....	.....	.....	.....	96.03	74.51	58.68	37.41	.....	.....	.....	.....

c Record unreliable.

TABLE 10—Continued

WATER LEVELS—LAKE OF THE WOODS—KENORA, ONTARIO

RECORDS OF KENORA MUNICIPAL POWER PLANT

1912	July				August				September			
	Local Datum		Sea-level Datum		Local Datum		Sea-level Datum		Local Datum		Sea-level Datum	
	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race
1	96.35	c71.90	1058.99	.....	96.49	74.66	1059.13	1037.56	97.10	73.70	1059.74	1036.60
2	96.40	c72.30	59.04	.....	96.47	74.67	59.11	37.57	96.90	74.58	59.54	37.48
3	96.15	73.60	58.79	1036.50	96.46	74.69	59.10	37.59	96.93	74.78	59.57	37.68
4	96.09	73.62	58.73	36.52	96.60	73.70	59.24	36.60	96.91	74.70	59.55	37.60
5	96.20	73.58	58.84	36.48	96.60	74.61	59.24	37.51	96.92	74.69	59.56	37.59
6	96.30	73.61	58.94	36.51	96.67	74.70	59.31	37.60	97.15	73.90	59.79	36.80
7	96.30	72.90	58.94	35.80	96.73	74.67	59.37	37.57	97.10	73.90	59.74	36.80
8	96.25	72.50	58.89	35.40	96.69	74.68	59.33	37.58	96.82	73.71	59.46	36.61
9	96.40	c71.35	59.04	.....	96.69	74.68	59.33	37.58	96.90	73.90	59.54	36.80
10	96.07	73.42	58.71	36.32	96.70	74.68	59.34	37.58	97.00	74.20	59.64	37.10
11	96.39	73.62	59.03	36.52	96.80	73.67	59.44	36.57	97.20	73.90	59.84	36.80
12	96.28	73.63	58.92	36.53	96.89	74.61	59.53	37.51	97.15	73.70	59.79	36.60
13	96.22	73.62	58.86	36.52	96.82	74.63	59.46	37.53	97.32	74.60	59.96	37.50
14	96.60	73.00	59.24	35.90	96.62	74.65	59.26	37.55	97.32	74.70	59.96	37.60
15	96.40	c71.90	59.04	.....	96.80	74.70	59.44	37.60	97.10	73.70	59.74	36.60
16	96.77	73.60	59.41	36.50	96.80	74.71	59.44	37.61	97.20	74.76	59.84	37.66
17	96.30	73.65	58.94	36.55	96.82	74.68	59.46	37.58	97.20	74.75	59.84	37.65
18	96.31	73.60	58.95	36.50	96.82	73.71	59.46	36.61	97.36	74.01	60.00	36.91
19	96.60	73.62	59.24	36.52	96.78	74.60	59.42	37.50	97.40	74.00	60.04	36.90
20	96.40	73.55	59.04	36.45	96.79	74.62	59.43	37.52	97.31	74.02	59.95	36.92
21	96.31	72.91	58.95	35.81	96.89	74.70	59.53	37.60	97.42	73.90	60.06	36.80
22	96.47	c72.01	59.11	.....	96.70	74.72	59.34	37.62	97.30	73.74	59.94	36.64
23	96.41	73.49	59.05	36.39	96.80	74.70	59.44	37.60	97.30	74.00	59.94	36.90
24	96.48	73.52	59.12	36.42	96.79	74.70	59.43	37.60	97.00	74.10	59.64	37.00
25	96.30	73.60	58.94	36.50	96.82	73.79	59.46	36.69	96.96	73.92	59.60	36.82
26	96.59	73.57	59.23	36.47	96.71	74.60	59.35	37.50	97.30	74.01	59.94	36.91
27	96.51	73.57	59.15	36.47	96.90	74.20	59.54	37.10	97.69	74.03	60.33	36.93
28	96.59	73.64	59.23	36.54	96.78	74.63	59.42	37.53	97.66	74.02	60.30	36.92
29	96.55	73.10	59.19	36.00	96.90	74.70	59.54	37.60	97.98	73.77	60.62	36.67
30	96.41	73.62	59.05	36.52	97.00	74.61	59.64	37.51	97.76	74.02	60.40	36.92
31	.....	.....	.....	.....	96.94	74.70	59.58	37.60	.....	.....	.....	.....

1912	October				November				December			
1	97.89	73.98	1060.53	1036.88	97.90	74.91	1060.54	1037.81	97.98	74.30	1060.62	1037.20
2	97.90	73.90	60.54	36.80	98.02	74.90	60.66	37.80	97.91	74.40	60.55	37.30
3	97.88	73.92	60.52	36.82	98.21	74.22	60.85	37.12	97.89	74.95	60.53	37.85
4	97.92	73.90	60.56	36.80	98.02	74.37	60.66	37.27	97.91	75.01	60.55	37.91
5	97.90	74.70	60.54	37.60	98.08	74.91	60.72	37.81	97.85	75.00	60.49	37.90
6	97.70	73.55	60.34	36.45	98.18	74.91	60.82	37.81	97.90	75.04	60.54	37.94
7	98.10	74.70	60.74	37.60	98.12	74.91	60.76	37.81	97.90	75.05	60.54	37.95
8	97.99	74.74	60.63	37.64	97.90	74.88	60.54	37.78	97.92	74.50	60.56	37.40
9	97.68	74.80	60.32	37.70	98.08	74.78	60.72	37.68	97.92	74.59	60.56	37.49
10	97.80	74.80	60.50	37.70	98.10	73.96	60.74	36.86	97.89	75.07	60.53	37.97
11	98.00	74.79	60.64	37.69	97.88	74.10	60.52	37.00	97.90	75.11	60.54	38.01
12	98.00	74.75	60.64	37.65	98.00	74.79	60.64	37.69	97.89	75.08	60.53	37.98
13	98.06	73.90	60.70	36.80	98.00	74.88	60.64	37.78	97.88	75.07	60.52	37.97
14	98.00	74.72	60.64	37.62	98.05	74.89	60.69	37.79	97.82	74.95	60.46	37.85
15	98.03	74.80	60.67	37.70	98.20	74.87	60.84	37.77	97.90	73.90	60.54	36.80
16	98.21	74.80	60.85	37.70	98.00	74.92	60.64	37.82	97.89	74.56	60.53	37.46
17	98.08	74.80	60.72	37.70	98.10	74.11	60.74	37.01	97.80	74.98	60.44	37.88
18	98.20	74.81	60.84	37.71	98.24	74.20	60.88	37.10	97.80	75.05	60.44	37.95
19	98.00	74.86	60.64	37.76	98.01	74.89	60.65	37.79	97.80	75.10	60.44	38.00
20	98.19	74.10	60.83	37.00	98.00	74.82	60.64	37.72	97.80	75.12	60.44	38.02
21	97.98	74.21	60.62	37.11	97.90	74.91	60.54	37.81	97.80	75.13	60.44	38.03
22	98.00	74.86	60.64	37.76	98.00	74.91	60.64	37.81	97.90	74.50	60.54	37.40
23	98.28	74.90	60.92	37.80	97.82	75.00	60.46	37.90	97.90	74.74	60.54	37.64
24	98.28	74.90	60.92	37.80	98.02	74.28	60.66	37.18	97.90	75.00	60.54	37.90
25	98.02	74.90	60.66	37.80	98.02	74.42	60.66	37.32	97.90	74.30	60.54	37.20
26	97.90	74.89	60.54	37.79	97.85	74.92	60.49	37.82	97.90	74.80	60.54	37.70
27	98.09	74.10	60.73	37.00	97.77	75.02	60.41	37.92	97.95	74.85	60.59	37.75
28	97.92	74.33	60.56	37.23	98.37	74.92	61.01	37.82	97.81	74.96	60.45	37.86
29	97.60	74.84	60.24	37.74	97.87	74.95	60.51	37.85	97.80	74.42	60.44	37.32
30	97.98	74.90	60.62	37.80	97.95	74.98	60.59	37.88	97.80	74.52	60.44	37.42
31	98.00	74.90	60.64	37.80	.....	.....	.....	.....	97.80	74.97	60.44	37.87

c Record unreliable.

TABLE 10—Continued

WATER LEVELS—LAKE OF THE WOODS—KENORA, ONTARIO

RECORDS OF KENORA MUNICIPAL POWER PLANT

1913	January				February			
	Local Datum		Sea-level Datum		Local Datum		Sea-level Datum	
	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race
1	97.90	75.01	1060.54	1037.91	97.62	75.15	1060.26	1038.05
2	97.80	75.03	60.44	37.93	97.87	74.60	60.51	37.50
3	97.75	75.03	60.39	37.93	97.73	74.82	60.37	37.72
4	97.80	75.07	60.44	37.97	97.60	75.13	60.24	38.03
5	97.83	74.47	60.47	37.37	97.61	75.12	60.25	38.02
6	97.80	74.60	60.44	37.50	97.62	75.15	60.26	38.05
7	97.75	75.10	60.39	38.00	97.62	75.02	60.26	37.92
8	97.68	75.10	60.32	38.00	97.63	74.94	60.27	37.84
9	97.77	75.08	60.41	37.98	97.63	74.44	60.27	37.34
10	97.77	75.09	60.41	37.99	97.55	74.46	60.19	37.36
11	97.76	75.07	60.40	37.97	97.60	74.94	60.24	37.84
12	97.80	74.49	60.44	37.39	97.60	74.99	60.24	37.89
13	97.79	74.60	60.43	37.50	97.62	74.98	60.26	37.88
14	97.75	75.05	60.39	37.95	97.57	74.92	60.21	37.82
15	97.78	75.14	60.42	38.04	97.57	75.02	60.21	37.92
16	97.63	75.15	60.27	38.05	97.64	74.40	60.28	37.30
17	97.72	75.21	60.36	38.11	97.63	74.44	60.27	37.34
18	97.69	75.21	60.33	38.11	97.61	74.90	60.25	37.80
19	97.74	74.62	60.38	37.52	97.62	74.91	60.26	37.81
20	97.74	74.82	60.38	37.72	97.62	74.91	60.26	37.81
21	97.64	75.15	60.28	38.05	97.61	74.90	60.25	37.80
22	97.69	75.23	60.33	38.13	97.58	74.90	60.22	37.80
23	97.70	75.20	60.34	38.10	97.63	74.27	60.27	37.17
24	97.63	75.25	60.27	38.15	97.67	74.47	60.31	37.37
25	97.69	75.20	60.33	38.10	97.63	74.91	60.27	37.81
26	97.72	74.63	60.36	37.53	97.62	74.92	60.26	37.82
27	97.71	74.63	60.35	37.53	97.63	74.91	60.27	37.81
28	97.62	75.12	60.26	38.02	97.66	74.40	60.30	37.30
29	97.63	75.14	60.27	38.04				
30	97.72	74.60	60.36	37.50				
31	97.62	75.12	60.26	38.02				

1913	March				April			
1	97.68	74.52	1060.32	1037.42	97.75	74.95	1060.42	1037.63
2	97.69	74.46	60.33	37.36	97.73	74.99	60.40	37.67
3	97.72	74.47	60.36	37.37	97.77	74.23	60.44	36.91
4	97.62	74.88	60.29	37.56	97.82	74.24	60.49	36.92
5	97.66	75.11	60.33	37.79	97.83	74.27	60.50	36.95
6	97.69	75.10	60.36	37.78	97.84	74.06	60.51	36.74
7	97.66	75.05	60.33	37.73	97.82	74.43	60.49	37.11
8	97.72	74.98	60.39	37.66	97.87	74.37	60.54	37.05
9	97.77	74.45	60.44	37.13	97.82	74.93	60.49	37.61
10	97.77	74.47	60.44	37.15	97.82	74.93	60.49	37.61
11	97.66	74.97	60.33	37.65	97.88	74.21	60.55	36.89
12	97.67	75.02	60.34	37.70	97.93	74.13	60.60	36.81
13	97.69	74.92	60.36	37.60	97.93	73.97	60.60	36.65
14	97.60	74.93	60.27	37.61	97.99	74.01	60.66	36.69
15	97.64	74.93	60.31	37.61	97.97	73.97	60.64	36.65
16	97.72	74.47	60.39	37.15	98.02	74.72	60.69	37.40
17	97.73	74.57	60.40	37.25	98.11	74.37	60.78	37.05
18	97.67	75.04	60.34	37.72	98.07	74.90	60.74	37.58
19	97.69	75.02	60.36	37.70	98.09	74.89	60.76	37.57
20	97.74	74.97	60.41	37.65	98.18	74.10	60.85	36.78
21	97.74	75.02	60.41	37.70	98.25	74.35	60.92	37.03
22	97.77	75.02	60.44	37.70	98.23	74.80	60.90	37.48
23	97.74	74.43	60.41	37.11	98.20	74.97	60.89	37.65
24	97.74	74.57	60.41	37.25	98.28	75.07	60.95	37.75
25	97.73	75.01	60.40	37.69	98.30	75.50	60.97	38.18
26	97.73	74.97	60.40	37.65	98.27	75.75	60.94	38.43
27	97.74	75.01	60.41	37.69	98.33	75.43	61.00	38.11
28	97.73	75.03	60.40	37.71	98.33	75.48	61.00	38.16
29	97.78	74.95	60.45	37.63	98.32	76.10	60.99	38.78
30	97.78	74.29	60.45	36.97	98.32	76.21	60.99	38.89
31	97.78	74.42	60.45	37.10				

TABLE 10—Continued

WATER LEVELS—LAKE OF THE WOODS—KENORA, ONTARIO

RECORDS OF KENORA MUNICIPAL POWER PLANT

1913	May				June			
	Local Datum		Sea-level Datum		Local Datum		Sea-level Datum	
	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race
1	98.27	76.35	1060.94	1039.03	98.24	77.86	1060.91	1040.54
2	98.28	76.39	60.95	39.07	98.36	77.78	61.03	40.46
3	98.31	76.41	60.98	39.09	98.16	78.08	60.83	40.76
4	98.54	76.18	61.21	38.86	98.42	78.20	61.09	40.88
5	98.41	76.16	61.08	38.84	98.31	78.20	60.98	40.88
6	98.36	76.54	61.03	39.22	97.92	78.26	60.59	40.94
7	98.40	76.69	61.07	39.37	98.23	78.21	60.90	40.89
8	98.20	76.69	60.87	39.37	98.37	78.05	61.04	40.73
9	98.38	76.72	61.00	39.40	98.48	77.87	61.15	40.55
10	98.42	76.78	61.09	39.46	98.52	78.20	61.19	40.88
11	98.61	76.52	61.28	39.20	98.49	78.26	61.16	40.94
12	98.39	76.41	61.06	39.09	98.38	78.15	61.05	40.83
13	98.21	76.81	60.88	39.49	98.31	78.10	60.98	40.78
14	98.37	77.17	61.04	39.85	98.37	78.02	61.04	40.70
15	98.33	77.52	61.00	40.20	98.33	77.93	61.00	40.61
16	98.40	77.70	61.07	40.38	98.28	77.80	60.95	40.48
17	98.30	77.82	60.97	40.50	98.12	77.99	60.79	40.67
18	98.31	77.68	60.98	40.36	98.22	78.10	60.89	40.78
19	98.36	77.60	61.03	40.28	98.16	78.18	60.83	40.86
20	98.34	77.60	61.01	40.28	98.11	78.12	60.78	40.80
21	98.16	77.81	60.83	40.49	98.08	78.14	60.75	40.82
22	98.54	77.90	61.01	40.58	98.17	77.92	60.84	40.60
23	98.41	77.95	61.08	40.63	98.32	77.87	60.99	40.55
24	98.15	77.81	60.82	40.49	98.24	77.98	60.91	40.66
25	c 98.90	77.68	.....	40.36	98.18	78.10	60.85	40.78
26	98.46	77.71	61.13	40.39	97.96	78.11	60.63	40.79
27	98.46	77.77	61.13	40.45	97.81	78.07	60.48	40.75
28	98.28	77.89	60.95	40.57	98.07	78.11	60.74	40.79
29	98.28	77.91	60.95	40.59	98.08	77.92	60.75	40.60
30	98.22	77.97	60.89	40.65	98.30	77.91	60.94	40.59
31	98.35	78.00	61.02	40.68	.....	.....	.....	.....

1913	July				August			
1	98.35	77.86	1061.02	1040.54	98.32	76.70	1060.99	1039.38
2	98.15	77.66	60.82	40.34	98.30	76.60	60.97	39.28
3	98.20	78.01	60.87	40.69	98.18	76.37	60.85	39.05
4	97.90	77.98	60.57	40.66	98.20	76.50	60.87	39.18
5	97.80	77.81	60.47	40.49	98.04	76.40	60.71	39.08
6	98.02	77.66	60.69	40.34	98.15	76.37	60.82	39.05
7	98.07	77.50	60.74	40.18	98.37	76.36	61.04	39.04
8	98.03	77.61	60.70	40.29	98.29	76.50	60.96	39.18
9	97.68	77.30	60.35	39.98	98.14	76.49	60.81	39.17
10	98.07	77.18	60.74	39.86	98.11	76.23	60.78	38.91
11	98.23	76.49	60.90	39.17	98.31	76.20	60.98	38.88
12	98.13	76.33	60.80	39.01	98.15	76.38	60.82	39.06
13	98.17	75.92	60.84	38.60	98.21	76.32	60.88	39.00
14	98.14	75.87	60.81	38.55	98.12	76.37	60.79	39.05
15	98.29	76.00	60.96	38.68	98.03	76.49	60.70	39.17
16	98.25	76.01	60.92	38.69	98.07	76.48	60.74	39.16
17	98.23	75.98	60.90	38.66	98.02	76.33	60.69	39.01
18	98.25	76.00	60.92	38.68	98.01	76.18	60.68	38.86
19	98.18	75.98	60.85	38.66	98.17	76.20	60.84	38.88
20	98.28	c 74.40	60.95	.....	98.10	76.21	60.77	38.89
21	98.43	75.30	61.10	37.98	98.09	76.21	60.76	38.89
22	98.38	75.29	61.05	37.97	98.02	76.29	60.69	38.97
23	98.21	75.37	60.88	38.05	98.07	76.20	60.74	38.88
24	98.29	76.05	60.96	38.73	98.09	76.05	60.76	38.73
25	98.46	76.39	61.13	39.07	98.14	76.09	60.81	38.77
26	98.33	76.53	61.00	39.21	97.94	76.10	60.61	38.78
27	98.23	76.20	60.90	38.88	98.06	76.03	60.73	38.71
28	98.38	76.40	61.05	39.08	97.90	76.11	60.57	38.79
29	98.31	76.60	60.98	39.28	97.90	76.08	60.57	38.76
30	98.34	76.69	61.01	39.37	98.01	76.06	60.68	38.74
31	98.30	76.70	60.97	39.38	97.90	75.95	60.57	38.63

c Record unreliable.

TABLE 10—Continued

WATER LEVELS—LAKE OF THE WOODS—KENORA, ONTARIO

RECORDS OF KENORA MUNICIPAL POWER PLANT

1913	SEPTEMBER				OCTOBER			
	Local Datum		Sea-level Datum		W. P. S. Datum		Sea-level Datum	
	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race
1	98.04	75.89	1060.71	1038.57	1058.59	1036.35	1059.90	1037.66
2	97.83	75.95	60.50	38.63	58.62	36.38	59.93	37.69
3	97.77	75.94	60.44	38.62	58.68	36.34	59.99	37.65
4	97.98	75.98	60.65	38.66	58.52	36.33	59.83	37.64
5	97.98	75.95	60.65	38.63	58.27	35.40	59.58	36.71
6	97.80	75.98	60.47	38.66	58.57	35.76	59.88	37.07
7	97.71	75.88	60.38	38.56	58.91	36.31	60.22	37.62
8	97.72	75.80	60.39	38.48	58.52	36.32	59.83	37.63
9	98.06	75.88	60.73	38.56	58.58	36.33	59.89	37.64
10	97.87	76.03	60.54	38.71	58.85	36.33	60.16	37.64
11	97.77	76.05	60.44	38.73	58.83	36.36	60.14	37.67
12	97.63	76.03	60.40	38.71	58.74	35.31	60.05	36.62
13	97.62	76.00	60.39	38.68	58.88	36.30	60.19	37.61
14	97.83	75.90	60.50	38.58	58.81	36.31	60.12	37.62
15	97.68	75.82	60.35	38.50	58.71	36.36	60.02	37.67
16	97.56	75.95	60.23	38.63	58.71	36.38	60.02	37.69
17	97.61	75.99	60.28	38.67	58.92	36.35	60.23	37.66
18	97.74	75.98	60.41	38.66	58.73	36.42	60.04	37.73
19	97.81	76.12	60.48	38.80	58.64	35.40	59.95	36.71
20	97.00	76.29	59.67	38.97	58.54	35.88	59.85	37.19
21	96.94	75.85	59.61	38.53	58.71	36.38	60.02	37.69
22	97.30	75.98	59.97	38.66	58.92	36.33	60.23	37.64
23	97.39	75.77	60.06	38.45	58.74	36.40	60.05	37.71
24	97.29	75.50	59.96	38.18	58.72	36.36	60.03	37.67
25	97.30	75.40	59.97	38.08	58.72	36.46	60.03	37.77
26	97.38	75.30	60.05	37.98	58.73	35.36	60.04	36.67
27	97.42	75.20	60.09	37.88	58.76	35.92	60.07	37.23
28	*1058.91	1035.65	60.22	36.96	58.30	36.45	59.61	37.76
29	58.53	36.32	59.84	37.63	58.67	36.43	59.98	37.74
30	58.70	36.38	60.01	37.69	58.78	36.42	60.09	37.73
31					58.82	36.34	60.13	37.65

1913	NOVEMBER				DECEMBER			
	W. P. S. Datum		Sea-level Datum		W. P. S. Datum		Sea-level Datum	
1	1058.87	1036.32	1060.18	1036.63	1058.75	1036.34	1060.06	1037.65
2	58.64	35.54	59.95	36.85	58.73	36.43	60.04	37.74
3	58.73	35.90	60.04	37.21	58.78	36.45	60.09	37.76
4	58.85	36.32	60.16	37.63	58.80	36.40	60.11	36.71
5	58.95	36.32	60.26	37.63	58.74	36.38	60.05	37.69
6	58.74	36.32	60.05	37.63	58.75	36.43	60.06	37.74
7	58.53	36.44	59.84	37.75	58.51	35.54	59.82	36.85
8	58.58	36.42	59.89	37.73	58.80	36.45	60.11	37.76
9	58.71	35.46	60.02	36.77	58.76	36.32	60.07	37.63
10	58.66	35.82	59.97	37.13	58.72	36.47	60.03	37.78
11	58.92	36.31	60.23	37.62	58.72	36.40	60.03	37.71
12	58.71	36.31	60.02	37.62	58.71	36.38	60.02	37.69
13	58.80	36.33	60.11	37.64	58.71	36.40	60.02	37.71
14	58.72	36.40	60.03	37.71	58.82	35.52	60.13	36.83
15	58.80	36.33	60.11	37.64	58.77	35.90	60.08	37.21
16	59.02	35.49	60.33	36.80	58.84	35.51	60.15	36.82
17	58.71	36.42	60.02	37.73	58.78	35.94	60.09	37.25
18	58.82	36.32	60.13	37.63	58.72	36.42	60.03	37.73
19	58.82	36.38	60.13	37.69	58.73	35.93	60.04	37.24
20	58.62	36.38	59.93	37.69	58.75	35.90	60.06	37.21
21	58.82	35.74	60.13	37.05	58.78	35.68	60.09	36.99
22	58.88	35.64	60.19	36.95	58.70	35.94	60.01	37.25
23	58.97	35.40	60.28	36.71	58.70	36.42	60.01	37.73
24	58.75	36.34	60.06	37.65	58.70	36.54	60.01	37.85
25	58.70	36.34	60.01	37.65	58.71	35.76	60.02	37.07
26	58.73	36.42	60.04	37.73	58.70	36.43	60.01	37.74
27	58.79	36.41	60.10	37.73	58.68	36.42	59.99	37.73
28	58.71	36.38	60.02	37.69	58.73	35.71	60.04	37.02
29	58.79	36.44	60.10	37.75	58.72	35.94	60.03	37.25
30	58.80	35.45	60.11	36.76	58.71	36.47	60.02	37.78
31					58.67	36.53	59.98	37.84

* Both gauges changed to Water Power Survey Datum.

TABLE 10—Continued

WATER LEVELS—LAKE OF THE WOODS—KENORA, ONTARIO

RECORDS OF KENORA MUNICIPAL POWER PLANT

1914	January				February			
	W. P. S. Datum		Sea-level Datum		W. P. S. Datum		Sea-level Datum	
	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race
1	1058.64	1036.49	1059.95	1037.80	1058.78	1035.83	1060.09	1037.14
2	58.66	36.46	59.97	37.77	58.74	35.76	60.05	37.07
3	58.64	36.42	59.95	37.73	58.74	35.78	60.05	37.09
4	58.60	35.60	59.91	36.91	58.77	35.94	60.08	37.25
5	58.72	35.98	60.03	37.29	58.74	35.92	60.05	37.23
6	58.70	35.81	60.01	37.12	58.75	35.93	60.06	37.24
7	58.73	35.68	60.04	37.99	58.75	35.93	60.06	37.24
8	58.68	36.32	59.99	37.63	58.80	35.72	60.11	37.03
9	58.68	36.41	59.99	37.72	58.76	35.93	60.07	37.24
10	58.70	36.43	60.01	37.74	58.74	35.90	60.05	37.21
11	58.72	35.85	60.03	37.16	58.76	35.92	60.07	37.23
12	58.70	36.43	60.01	37.74	58.74	35.94	60.05	37.25
13	58.68	36.48	59.99	37.79	58.76	35.87	60.07	37.18
14	58.68	36.41	59.99	37.72	58.76	35.92	60.07	37.23
15	58.68	36.30	59.99	37.61	58.73	35.67	60.04	36.98
16	58.68	35.91	59.99	37.22	58.75	35.88	60.06	37.19
17	58.71	35.81	60.02	37.12	58.74	35.81	60.05	37.12
18	58.73	35.52	60.04	36.83	58.76	35.81	60.07	37.12
19	58.72	35.71	60.03	37.02	58.76	35.85	60.07	37.16
20	58.67	35.80	59.98	37.11	58.76	35.91	60.07	37.22
21	58.73	35.87	60.04	37.18	58.77	35.87	60.08	37.18
22	58.68	35.83	59.99	37.14	58.75	35.82	60.06	37.13
23	58.67	35.79	59.98	37.10	58.75	35.90	60.06	37.21
24	58.60	35.50	59.91	36.81	58.80	35.86	60.11	37.17
25	58.73	35.62	60.04	36.93	58.74	35.89	60.05	37.20
26	58.70	35.90	60.01	37.21	58.75	35.84	60.06	37.15
27	58.72	35.79	60.03	37.10	58.78	35.95	60.09	37.26
28	58.69	35.90	60.00	37.21	58.78	36.45	60.09	37.76
29	58.76	35.93	60.07	37.24	.....	.....	.....	.....
30	58.76	35.90	60.07	37.21	.....	.....	.....	.....
31	58.80	35.88	60.11	37.19	.....	.....	.....	.....

1914	March				April			
1	1058.76	1035.80	1060.07	1037.11	1058.61	1035.72	1059.92	1037.03
2	58.76	36.40	60.07	37.71	58.61	35.72	59.92	37.03
3	58.78	36.50	60.09	37.81	58.64	35.83	59.95	37.14
4	58.75	36.50	60.06	37.81	58.62	35.86	59.93	37.17
5	58.60	36.52	59.91	37.83	58.62	35.72	59.93	37.03
6	58.62	36.50	59.93	37.81	58.63	35.72	59.94	37.03
7	58.63	36.52	59.94	37.83	58.53	35.88	59.84	37.19
8	58.66	35.84	59.97	37.15	58.57	35.87	59.88	37.18
9	58.62	36.52	59.93	37.83	58.61	35.83	59.92	37.14
10	58.58	36.52	59.89	37.83	58.61	35.58	59.92	36.89
11	58.63	36.57	59.94	37.88	58.62	35.78	59.93	37.09
12	58.59	36.52	59.90	37.83	58.51	35.67	59.82	36.98
13	58.63	36.51	59.94	37.82	58.56	35.70	59.87	37.01
14	58.64	36.47	59.95	37.78	58.55	35.71	59.86	37.02
15	58.70	35.74	60.01	37.05	58.52	36.20	59.83	37.51
16	58.62	36.07	59.93	37.38	58.53	36.42	59.84	37.73
17	58.55	36.51	59.86	37.82	58.50	36.35	59.81	37.66
18	58.56	36.38	59.87	37.69	58.50	36.29	59.81	37.60
19	58.58	36.10	59.89	37.41	58.64	35.60	59.95	36.91
20	58.53	36.48	59.84	37.79	58.64	36.37	59.95	37.68
21	58.53	36.50	59.84	37.81	58.67	36.37	59.98	37.68
22	58.61	35.84	59.92	37.15	58.71	35.76	60.02	37.07
23	58.55	36.46	59.86	37.77	58.71	35.72	60.02	37.03
24	58.54	36.50	59.85	37.81	58.74	35.70	60.05	37.01
25	58.47	36.54	59.78	37.85	58.78	35.66	60.09	36.97
26	58.57	36.03	59.88	37.34	58.82	35.51	60.13	36.82
27	58.56	35.98	59.87	37.29	58.78	35.71	60.09	37.02
28	58.60	35.97	59.91	37.28	58.71	35.78	60.02	37.09
29	58.60	35.73	59.91	37.04	58.80	35.84	60.11	37.15
30	58.59	35.84	59.90	37.15	58.84	35.74	60.15	37.05
31	58.60	35.70	59.91	37.01	.....	.....	.....	.....

TABLE 10—Continued

WATER LEVELS—LAKE OF THE WOODS—KENORA, ONTARIO

RECORDS OF KENORA MUNICIPAL POWER PLANT

1914	May				June			
	W. P. S. Datum		Sea-level Datum		W. P. S. Datum		Sea-level Datum	
	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race
1	1058.88	1035.75	1060.19	1037.06	1059.67	1038.10	1060.98	1039.41
2	58.92	35.66	60.23	36.97	59.72	38.34	61.03	39.65
3	58.92	35.64	60.23	36.95	59.68	38.68	60.99	39.99
4	58.93	35.57	60.24	36.88	59.56	38.68	60.87	39.99
5	58.96	35.74	60.27	37.05	59.74	38.71	61.05	40.02
6	59.02	36.50	60.33	37.81	59.71	38.71	61.02	40.02
7	59.03	36.52	60.34	37.83	59.73	38.33	61.04	39.64
8	59.12	36.54	60.43	37.85	59.71	38.54	61.02	39.85
9	59.15	36.64	60.46	37.95	59.87	38.91	61.18	40.22
10	59.05	35.92	60.36	37.23	59.98	39.10	61.29	40.41
11	59.10	36.53	60.41	37.84	59.88	39.10	61.19	40.41
12	59.17	36.60	60.48	37.91	59.94	39.10	61.25	40.41
13	59.16	36.69	60.47	38.00	59.94	39.12	61.25	40.43
14	59.14	36.68	60.45	37.99	60.02	38.88	61.33	40.19
15	59.27	36.22	60.58	37.53	59.91	38.90	61.22	40.21
16	59.24	36.71	60.55	38.02	60.02	39.07	61.33	40.38
17	59.40	35.87	60.71	37.18	60.09	39.12	61.40	40.43
18	59.37	36.04	60.68	37.35	59.74	39.14	61.05	40.45
19	59.30	36.57	60.61	37.88	59.94	39.23	61.25	40.54
20	59.34	36.72	60.65	38.03	60.16	39.32	61.47	40.63
21	59.33	36.73	60.64	38.04	59.88	39.08	61.19	40.39
22	59.36	37.08	60.67	38.39	60.03	39.13	61.34	40.44
23	59.40	37.23	60.71	38.54	60.10	39.30	61.41	40.61
24	59.54	36.66	60.85	37.97	59.90	39.48	61.21	40.79
25	59.58	36.72	60.89	38.03	59.73	39.64	61.04	40.95
26	59.52	37.31	60.83	38.62	59.78	39.70	61.09	41.01
27	59.54	37.45	60.85	38.76	59.63	39.68	60.94	40.99
28	59.57	37.73	60.88	39.04	59.84	39.45	61.15	40.76
29	59.54	38.06	60.85	39.37	59.87	39.30	61.18	40.61
30	59.65	38.23	60.96	39.54	59.87	39.44	61.18	40.75
31	59.66	38.02	60.97	39.33				

1914	July				August			
1	1059.75	1039.41	1061.06	1040.72	1059.71	1039.46	1061.02	1040.77
2	59.95	39.27	61.26	40.58	59.58	39.17	60.89	40.48
3	59.90	39.31	61.21	40.62	59.78	39.17	61.09	40.48
4	59.81	39.33	61.12	40.64	59.58	39.31	60.89	40.62
5	59.84	39.36	61.15	40.67	59.54	39.54	60.85	40.85
6	59.98	39.28	61.29	40.59	59.31	39.50	60.62	40.81
7	59.59	39.36	60.90	40.67	59.46	39.27	60.77	40.58
8	59.83	39.50	61.14	40.81	59.50	39.28	60.81	40.59
9	59.84	39.50	61.15	40.81	59.46	39.11	60.77	40.42
10	59.68	39.58	60.99	40.89	59.10	38.95	60.41	40.26
11	59.72	39.62	61.03	40.93	59.30	39.07	60.61	40.38
12	59.87	39.43	61.18	40.74	59.34	39.10	60.65	40.41
13	59.73	39.30	61.04	40.61	59.23	39.10	60.54	40.41
14	59.85	39.43	61.16	40.74	59.13	39.07	60.44	40.38
15	59.98	39.50	61.29	40.81	59.13	39.06	60.44	40.37
16	60.07	39.60	61.38	40.91	59.12	38.92	60.43	40.23
17	59.61	39.57	60.92	40.88	59.12	38.92	60.43	40.23
18	59.88	39.73	61.19	41.04	59.11	38.93	60.42	40.24
19	59.87	39.50	61.18	40.81	59.06	39.12	60.37	40.43
20	59.87	39.58	61.18	40.89	59.07	39.20	60.38	40.51
21	59.91	39.50	61.22	40.81	59.02	39.24	60.33	40.55
22	59.77	39.53	61.08	40.84	59.07	39.20	60.38	40.51
23	59.86	39.56	61.17	40.87	58.72	38.90	60.03	40.21
24	59.82	39.54	61.13	40.85	58.92	38.90	60.23	40.21
25	59.85	39.54	61.16	40.85	58.82	39.07	60.13	40.38
26	59.87	39.33	61.18	40.64	58.88	38.89	60.19	40.20
27	59.72	39.32	61.03	40.63	58.98	38.52	60.29	39.83
28	59.85	39.54	61.16	40.85	59.07	38.13	60.38	39.44
29	59.88	39.45	61.19	40.76	59.14	37.77	60.45	39.08
30	59.75	39.50	61.06	40.81	59.02	37.49	60.33	38.80
31	59.63	39.47	60.94	40.78	59.07	37.48	60.38	38.79

* TABLE 10—Continued

WATER LEVELS—LAKE OF THE WOODS—KENORA, ONTARIO

RECORDS OF KENORA MUNICIPAL POWER PLANT

1914	SEPTEMBER				OCTOBER			
	W. P. S. Datum		Sea-level Datum		W. P. S. Datum		Sea-level Datum	
	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race
1	1058.98	1037.58	1060.29	1038.89	1059.18	1037.24	1060.49	1038.55
2	58.94	37.28	60.25	38.59	59.25	37.25	60.56	38.56
3	58.68	37.12	59.99	38.43	59.14	37.27	60.45	38.58
4	58.98	36.98	60.29	38.29	59.14	36.72	60.45	38.03
5	58.88	37.30	60.19	38.61	59.02	37.02	60.33	38.33
6	58.80	36.82	60.11	38.13	59.08	37.15	60.39	38.46
7	58.85	37.28	60.16	38.59	58.98	37.13	60.29	38.44
8	58.88	37.28	60.19	38.59	59.02	37.17	60.33	38.48
9	59.03	37.29	60.34	38.60	59.08	37.14	60.39	38.45
10	59.01	37.30	60.32	38.61	58.92	37.24	60.23	38.55
11	59.00	36.93	60.31	38.24	59.24	36.89	60.55	38.20
12	59.10	37.27	60.41	38.58	59.02	36.74	60.33	38.05
13	59.26	36.80	60.57	38.11	59.19	36.81	60.50	38.12
14	58.94	37.16	60.25	38.47	59.36	37.29	60.67	38.60
15	59.11	37.28	60.42	38.59	59.28	36.86	60.59	38.17
16	59.13	37.30	60.44	38.61	59.34	36.67	60.65	37.98
17	59.03	37.30	60.34	38.61	59.16	36.64	60.47	37.95
18	59.18	37.32	60.49	38.63	59.49	35.82	60.80	37.13
19	59.25	37.32	60.56	38.63	59.34	35.90	60.65	37.21
20	59.20	36.90	60.51	38.21	59.32	36.48	60.63	37.79
21	59.18	37.15	60.49	38.46	59.26	36.02	60.57	37.33
22	58.92	37.37	60.23	38.68	59.30	36.50	60.61	37.81
23	59.14	37.34	60.45	38.65	59.08	35.90	60.39	37.21
24	58.90	37.34	60.21	38.65	59.36	35.74	60.67	37.05
25	59.12	37.35	60.43	38.66	59.32	35.66	60.63	36.97
26	59.14	37.32	60.45	38.63	59.03	35.69	60.34	37.00
27	59.14	36.77	60.45	38.08	59.48	35.76	60.79	37.07
28	59.10	37.10	60.41	38.41	59.23	35.76	60.54	37.07
29	59.02	37.25	60.33	38.56	59.32	36.30	60.63	37.61
30	59.13	37.26	60.44	38.57	59.37	36.34	60.68	37.65
31					59.42	36.37	60.73	37.68

1914	NOVEMBER				DECEMBER			
1	1059.26	1035.52	1060.57	1036.83	1059.38	1036.33	1060.69	1037.64
2	59.50	35.78	60.81	37.09	59.44	36.39	60.75	37.70
3	59.44	36.30	60.75	37.61	59.42	36.34	60.73	37.65
4	59.30	36.29	60.61	37.60	59.42	36.36	60.73	37.67
5	59.28	36.28	60.59	37.59	59.44	36.34	60.75	37.65
6	59.41	36.31	60.72	37.62	59.48	35.68	60.79	36.99
7	59.12	36.39	60.43	37.70	59.42	35.77	60.73	37.08
8	59.48	35.57	60.79	36.88	59.34	36.32	60.65	37.63
9	59.45	35.87	60.76	37.18	59.37	36.30	60.68	37.61
10	59.37	36.31	60.68	37.62	59.41	36.30	60.72	37.61
11	59.27	36.34	60.58	37.65	59.42	36.33	60.73	37.64
12	59.32	36.36	60.63	37.67	59.40	36.35	60.71	37.66
13	59.32	36.37	60.63	37.68	59.48	35.67	60.79	36.98
14	59.25	36.34	60.56	37.65	59.42	36.39	60.73	37.70
15	59.50	35.71	60.81	37.02	59.45	36.42	60.76	37.73
16	59.32	35.89	60.63	37.20	59.46	36.43	60.77	37.74
17	59.31	36.34	60.62	37.65	59.47	36.42	60.78	37.73
18	59.28	36.39	60.59	37.70	59.44	36.43	60.75	37.74
19	59.31	36.37	60.62	37.68	59.43	36.40	60.74	37.71
20	59.36	36.39	60.67	37.70	59.49	35.70	60.80	37.01
21	59.30	36.37	60.61	37.68	59.43	36.31	60.74	37.62
22	59.41	35.70	60.72	37.01	59.44	36.46	60.75	37.77
23	59.47	35.88	60.78	37.19	59.43	36.40	60.74	37.71
24	59.42	36.26	60.73	37.57	59.43	36.43	60.74	37.74
25	59.41	36.21	60.72	37.52	59.48	35.85	60.79	37.16
26	59.36	36.31	60.67	37.62	59.46	35.89	60.77	37.20
27	59.34	36.35	60.65	37.66	59.52	35.71	60.83	37.02
28	59.38	36.31	60.69	37.62	59.41	36.40	60.72	37.71
29	59.47	35.36	60.78	36.67	59.43	36.37	60.74	37.68
30	59.41	35.77	60.72	37.08	59.44	36.42	60.75	37.73
31					59.44	36.37	60.75	37.68

* For 1915 records see page 299.

TABLE 11

WATER LEVELS—LAKE OF THE WOODS—KENORA, ONTARIO

RECORDS OF ONTARIO HYDRO-ELECTRIC POWER COMMISSION

1905	August		September		October		November		December	
	Gauge Height	Sea-level Datum	Gauge Height	Sea-level Datum	Gauge Height	Sea-level Datum	Gauge Height	Sea-level Datum	Gauge Height	Sea-level Datum
1							604.1	1061.3	604.3	1061.5
2							604.3	61.5	604.3	61.5
3							604.1	61.3	604.3	61.5
4							604.3	61.5	604.4	61.6
5							604.2	61.4	604.3	61.5
6							604.2	61.4	604.35	61.55
7							604.1	61.3	604.4	61.6
8							604.2	61.4	604.3	61.5
9							604.3	61.5	604.4	61.6
10							604.3	61.5	604.4	61.6
11							604.2	61.4	604.4	61.6
12							604.2	61.4	604.4	61.6
13							603.9	61.1	604.4	61.6
14					604.2	*1061.4	604.3	61.5	604.4	61.6
15					604.2	61.4	604.2	61.4	604.4	61.6
16					604.2	61.4	604.3	61.5	604.4	61.6
17					604.0	61.2	604.2	61.4	604.4	61.6
18					604.1	61.3	604.2	61.4	604.4	61.6
19					604.1	61.3	604.3	61.5	604.4	61.6
20					604.1	61.3	604.3	61.5	604.35	61.55
21					604.2	61.4	604.4	61.6	604.35	61.55
22					604.3	61.5	604.3	61.5	604.35	61.55
23					603.9	61.1	604.2	61.4	604.35	61.55
24					604.1	61.3	603.9	61.1	604.4	61.6
25					604.35	61.55	604.3	61.5	604.4	61.6
26					604.2	61.4	604.3	61.5	604.4	61.6
27					604.0	61.2	604.2	61.4	604.35	61.55
28					604.2	61.4	603.9	61.1	604.35	61.55
29					604.3	61.5	604.2	61.4	604.35	61.55
30					604.2	61.4	604.3	61.5	604.35	61.55
31					604.3	61.5			604.35	61.55

1906	January		February		March		April		May	
1	604.35	1061.55	604.25	1061.45	604.0	1061.2	603.55	1060.75	604.05	1061.25
2	604.35	61.55	604.25	61.45	604.0	61.2	603.5	60.7	604.1	61.3
3	604.35	61.55	604.25	61.45	603.9	61.1	603.5	60.7	604.15	61.35
4	604.35	61.55	604.20	61.40	603.95	61.15	603.5	60.7	604.1	61.3
5	604.35	61.55	604.20	61.40	603.9	61.1	603.5	60.7	604.1	61.3
6	604.35	61.55	604.20	61.40	603.9	61.1	603.45	60.65	604.05	61.25
7	604.35	61.55	604.20	61.40	603.9	61.1	603.45	60.65	604.05	61.25
8	604.35	61.55	604.20	61.40	603.85	61.05	603.45	60.65	604.0	61.2
9	604.35	61.55	604.15	61.35	603.85	61.05	603.45	60.65	603.95	61.15
10	604.3	61.5	604.15	61.35	603.85	61.05	603.45	60.65	604.05	61.25
11	604.3	61.5	604.15	61.35	603.85	61.05	603.45	60.65	603.8	61.0
12	604.3	61.5	604.15	61.35	603.8	61.0	603.45	60.65	603.8	61.0
13	604.3	61.5	604.15	61.35	603.8	61.0	603.5	60.7	603.85	61.05
14	604.3	61.5	604.15	61.35	603.8	61.0	603.55	60.75	603.8	61.00
15	604.3	61.5	604.15	61.35	603.8	61.0	603.6	60.8	603.8	61.00
16	604.25	61.45	604.15	61.35	603.8	61.0	603.65	60.85	603.8	61.00
17	604.25	61.45	604.1	61.30	603.8	61.0	603.65	60.85	603.75	60.95
18	604.25	61.45	604.1	61.30	603.8	61.0	603.75	60.95	†603.75	60.95
19	604.25	61.45	604.1	61.30	603.75	60.95	603.8	61.0		
20	604.25	61.45	604.1	61.30	603.75	60.95	603.85	61.05		
21	604.25	61.45	604.05	61.25	603.75	60.95	604.0	61.2		
22	604.25	61.45	604.05	61.25	603.7	60.90	603.9	61.1		
23	604.25	61.45	604.05	61.25	603.65	60.85	604.05	61.25		
24	604.25	61.45	604.05	61.25	603.65	60.85	604.05	61.25		
25	604.25	61.45	604.05	61.25	603.65	60.85	604.05	61.25		
26	604.25	61.45	604.05	61.25	603.6	60.8	604.05	61.25		
27	604.25	61.45	604.05	61.25	603.6	60.8	604.1	61.3		
28	604.25	61.45	604.0	61.20	603.6	60.8	604.1	61.3		
29	604.25	61.45			603.55	60.75	604.15	61.35		
30	604.25	61.45			603.55	60.75	604.0	61.2		
31	604.25	61.45			603.55	60.75				

* The bench marks at Kenora used by the Ontario Hydro-Electric Power Commission were destroyed during the reconstruction of the plant. The gauge readings were reduced to sea-level datum by the addition of 457.20.

† Readings discontinued.

TABLE 12

WATER LEVELS—LAKE OF THE WOODS—KEEWATIN, ONTARIO

RECORDS OF WM. LYON, AT HEADWORKS OF OLD KEEWATIN LUMBER AND MFG. COMPANY

Date	Gauge Height	Sea-level Datum
1898		
Apr. 20	0′0″	1057.02
[1] Nov. 18	3′0″	60.02
1899		
Apr. 20	2′6″	59.52
July 14	5′2″	62.19
Nov. 20	4′0″	61.02
1900		
[2] Apr. 7	2′0″	59.02
May 14	1′9″	58.77
June 8	1′6″	58.52
July 24	1′4″	58.35
Sept. 5	1′11″	58.94
17	2′5½″	59.48
18	2′7″	59.60
20	2′8½″	59.72
21	2′11½″	59.98
22	3′0¾″	60.08
Oct. 4	3′5″	1060.44
5	3′6½″	60.56
8	3′10½″	60.92
9	4′0″	61.02
10	4′2½″	61.23
16	4′4″	61.40
17	4′6″	61.52
19	4′7″	61.60
Nov. 2	4′11½″	61.98
3	5′2″	62.19
9	5′4″	62.35
16	5′4″	62.35
1901		
Apr. 8	2′7½″	59.65
24	3′3½″	60.32
May 17	3′8″	60.68
Nov. 14	2′5½″	59.48
1902		
Apr. 2	1′5¾″	1058.50
24	1′8½″	58.73
May 13	2′8″	59.68
1904		
Apr. 16	1′3″	58.27
1905		
Apr. 22	1′1″	58.10
May 20	2′3″	59.27
Aug. 8	4′9″	61.77
1906		
Apr. 10	3′6″	60.52

[1] Stop logs put in new K. P. Co. Dam.
[2] Stop logs put in K. P. Co. Dam, Apr. 5, 1900.

TABLE 13

WATER LEVELS—LAKE OF THE WOODS—KENORA, ONTARIO

RECORDS OF GEORGE DREWRY, AT HIS BOAT-HOUSE

Date	*Gauge Height	Sea-level Datum
1908		
July 5	4′8″	1061.23
26	4′4″	60.90
Aug. 11	3′11″	60.49
Sept. 7	3′10″	60.40
Oct. 27	3′5″	59.99
1909		
May 12	2′5″	58.99
15	2′7″	59.15
21	2′9″	59.32
June 17	2′10½″	59.45
26	3′0″	59.57
July 10	3′3″	59.82
Aug. 17	3′5″	59.99
Nov. 15	3′9″	60.32
1910		
Mar. 28	4′5″	1060.99
Apr. 2	4′8″	61.24
12	4′9″	61.32
19	4′11″	61.49
25	5′0″	61.57
June 7	4′6″	61.07
July 7	3′9″	60.32
Aug. 8	3′0″	59.57
Sept. 13	2′4″	58.90
21	2′3″	58.82
29	2′2″	58.74
Oct. 20	1′10″	58.40
Nov. 6	1′9″	58.32
12	1′7″	58.15
1911		
Apr. 17	0′7″	1057.15
June 8	0′9″	57.32
29	0′11″	57.49
Sept. 10	0′3″	56.82
Nov. 14	0′4½″	56.94
1912		
Apr. 4	0′10″	57.40
30	1′3″	57.82
May 6	1′4½″	57.94
9	1′6″	58.07
21	1′9″	58.32
June 2	2′1″	58.65
21	2′2″	58.74
July 8	2′2″	58.74
21	2′5″	58.99
31	2′6½″	59.11

*5′3″ on this gauge stick is level with the top of boat house floor and once since the year 1900 there was 4″ of water on top of the floor, being as you will observe, 7″ higher than the high record herein of 25th April, 1910.

TABLE 14

WATER LEVELS—LAKE OF THE WOODS—NORMAN AND KEEWATIN, ONTARIO

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

1912	June				July				August				Local Datum	Sea-level Datum
	Local Datum		Sea-level Datum		Local Datum		Sea-level Datum		Local Datum		Sea-level Datum			
	Ab'ove Dam	River Bridge	Above Dam	River Bridge	Ab'ove Dam	River Bridge	Above Dam	River Bridge	Ab'ove Dam	River Bridge	Above Dam	River Bridge	River Bridge	River Bridge
1						72.28		1033.45		72.87		1034.04		
2						72.23		33.40		72.88		34.05		
3						72.55		33.72		72.91		34.08		
4						72.62		33.79		72.66		33.83		
5						72.62		33.79		72.60		33.77		
6	97.00		1058.58			72.67		33.84		72.81		33.98		
7						72.48		33.65		72.94		34.11		
8						72.51		33.68		72.97		34.14		
9						72.57		33.74		72.99		34.16		
10						72.58		33.75		73.00		34.17		
11						72.61		33.78		72.82		33.99		
12						72.67		33.84		72.75		33.92		
13						72.72		33.89	97.82	72.95	1059.40	34.12		
14						72.45		33.62	97.68	73.01	59.26	34.18		
15						72.47		33.64		73.07		34.24		
16						72.60		33.77		73.09		34.26		
17						72.68		33.85		73.10		34.27		
18						72.72		33.89		72.95		34.12		
19						72.72		33.89		72.88		34.05		
20						72.76		33.93		73.48		34.65		
21	97.03		58.61			72.50		33.67		73.78		34.95		
22						72.46		33.63		73.12		34.29		
23						72.65		33.82		73.17		34.34		
24						72.75		33.92		73.20		34.37		
25						72.82		33.99		73.02		34.19		
26						72.84		34.01		73.18		34.35		
27					97.53	72.70	1059.11	33.87		73.08		34.25		
28					97.49	72.50	59.07	33.67		73.11		34.28		
29		72.77		1033.94		72.74		33.91	97.92	73.16	59.50	34.33		
30		72.47		33.64	97.48	72.85	59.06	34.02		73.21		34.38		
31						72.87		34.04		73.23		34.40		

1912	September				October				November				December	
1		73.03		1034.20		73.57		1034.74		76.09		1037.26	76.06	1037.23
2		72.98		34.15		73.60		34.77		76.06		37.23	75.62	36.79
3		73.13		34.30		73.63		34.80		76.01		37.18	76.08	37.25
4		73.25		34.42	98.67	73.92	1060.25	35.09		75.94		37.11		
5		73.32		34.49		74.52		35.69		76.12		37.29		
6		73.28		34.45		74.61		35.78		76.04		37.21		
7		73.27		34.44		74.76		35.93		75.91		37.08	76.15	37.32
8		73.08		34.25		75.01		36.18		75.45		36.62		
9		73.03		34.20		75.05		36.22		75.33		36.50		
10	98.02	73.18	1059.60	34.35		75.16		36.33		74.85		36.02		
11	98.16	73.23	59.74	34.40	98.80	75.28	60.38	36.45		74.83		36.00		
12	98.22	73.24	59.80	34.41	98.83	75.36	60.41	36.53		75.28		36.45		
13	98.22	73.31	59.80	34.48		75.21		36.38	98.65	75.65	1060.23	36.82		
14		73.40		34.57		75.18		36.35	98.83	75.83	60.41	37.00	76.12	37.29
15		73.28		34.45		75.37		36.54		75.88		37.05		
16	98.23	73.21	59.81	34.38		75.48		36.65	98.70	75.91	60.28	37.08		
17	98.22	73.31	59.80	34.48		75.62		36.79		75.81		36.98		
18		73.34		34.51	98.81	75.88	60.39	37.05		75.82		36.99		
19	98.27	73.36	59.85	34.53		75.98		37.15		75.88		37.05		
20		73.37		34.54		75.84		37.01		75.90		37.07		
21		73.40		34.57		75.83		37.00		75.97		37.14	76.10	37.27
22	98.32	73.28	59.90	34.45		76.02		37.19		76.04		37.21		
23		73.22		34.39		76.04		37.21		76.14		37.31		
24		73.33		34.50		76.12		37.29		75.53		36.70		
25		73.39		34.56		76.07		37.24		75.51		36.68		
26	98.40	73.46	59.98	34.63		76.06		37.23		76.09		37.26		
27		73.52		34.69		75.93		37.10		76.15		37.32		
28		73.57		34.74		75.83		37.00		76.29		37.46	76.12	37.29
29		73.47		34.64		76.00		37.17		76.25		37.42		
30		73.47		34.64		76.04		37.21		76.24		37.41		
31						76.12		37.29						

TABLE 14—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN AND KEEWATIN, ONTARIO

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

1913	January		February		March		April		May	
	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum
	River Bridge	River Bridge	River Bridge	River Bridge	River Bridge	River Bridge	River Bridge	River Bridge	River Bridge	River Bridge
1			76.08	1037.26			73.75	1034.93	78.23	1039.41
2							73.80	34.98	78.29	39.47
3							73.78	34.96	78.37	39.55
4	76.15	1037.33					73.72	34.90	78.28	39.46
5							73.72	34.90	78.24	39.42
6							73.60	34.78	78.44	39.62
7							73.68	34.86	78.56	39.74
8			75.90	37.08			73.70	34.88	78.56	39.74
9							73.80	34.98	78.59	39.77
10					73.70	1034.88	73.84	35.02	78.64	39.82
11	76.00	37.18			74.00	35.18	73.82	35.00	78.45	39.63
12					74.05	35.23	73.80	34.98	78.42	39.60
13					74.08	35.26	73.69	34.87	78.80	39.98
14					74.10	35.28	73.65	34.83	79.14	40.32
15			75.42	36.60	74.10	35.28	73.75	34.93	79.56	40.74
16					73.90	35.08	73.81	34.99	79.70	40.88
17					73.72	34.90	73.93	35.11	79.74	40.92
18	76.00	37.18			73.98	35.16	74.05	35.23	79.69	40.87
19					74.02	35.20	74.11	35.29	79.72	40.90
20					74.10	35.28	73.95	35.13	79.79	40.97
21					74.12	35.30	73.94	35.12	79.84	41.02
22					74.12	35.30	75.08	36.26	79.93	41.11
23					73.90	35.08	75.84	37.02	80.26	41.44
24					73.73	34.91	76.65	37.83	79.90	41.08
25	76.05	37.23			73.90	35.08	77.28	38.46	79.80	40.98
26					73.88	35.06	77.60	38.78	79.82	41.00
27					73.88	35.06	77.55	38.73	79.92	41.10
28					73.87	35.05	77.66	38.84	79.94	41.12
29					73.84	35.02	77.99	39.17	79.99	41.17
30					73.72	34.90	78.14	39.32	80.04	41.22
31					73.62	34.80			80.08	41.26

1913	June				July				August					
	Local Datum		Sea-level Datum		Local Datum		Sea-level Datum		Local Datum		W. P. S. Datum	Sea-level Datum		
	Lake	River Bridge	Lake	River Bridge	Lake	River Bridge	Lake	River Bridge	Lake	River Bridge	Above Dam	Lake	Above Dam	River Bridge
1		79.94		1041.12	99.54	79.87	1060.61	1041.05	99.89	78.58	*98.06	1060.96	1059.66	1039.76
2		79.93		41.11	99.62	79.78	60.69	40.96	99.87	78.61		60.94		39.79
3		80.09		41.27	99.78	79.97	60.85	41.15	99.77	78.43		60.84		39.61
4		80.16		41.34	99.49	79.98	60.56	41.16	99.79	78.40		60.86		39.58
5		80.22		41.40	99.38	79.94	60.45	41.12	99.63	78.50		60.70		39.68
6		80.25		41.43	99.62	79.74	60.69	40.92	99.71	78.49	*97.92	60.78	59.52	39.67
7		80.22		41.40	99.62	79.64	60.69	40.82	99.97	78.53		61.04		39.71
8		80.09		41.27	99.63	79.45	60.70	40.63	99.83	78.59	*98.00	60.90	59.60	39.77
9		80.02		41.20	99.23	78.94	60.30	40.12	99.71	78.57		60.78		39.75
10	100.06	80.16	1061.13	41.34	99.63	78.27	60.70	39.45	99.67	78.36		60.74		39.54
11	100.08	80.22	61.15	41.40	99.87	78.14	60.94	39.32	99.87	78.36		60.94		39.54
12	99.98	80.29	61.05	41.47	99.69	78.01	60.76	39.19	99.81	78.47		60.88		39.65
13	99.89	80.28	60.96	41.46	99.72	77.73	60.79	38.91	99.74	78.48		60.81		39.66
14	99.90	80.19	60.97	41.37	99.74	77.54	60.81	38.72	99.70	78.46		60.77		39.64
15	99.88	79.98	60.95	41.16	99.88	77.62	60.95	38.80	99.65	78.55		60.72		39.73
16	99.90	79.97	60.97	41.15	99.88	77.64	60.95	38.82	99.63	78.57		60.70		39.75
17	99.72	80.10	60.79	41.28	99.83	77.62	60.90	38.80	99.60	78.39		60.67		39.57
18	99.81	80.13	60.88	41.31	99.83	77.61	60.90	38.79	99.69	78.25		60.76		39.43
19	99.69	80.15	60.76	41.33	99.79	77.57	60.86	38.75	99.86	78.26		60.93		39.44
20	99.69	80.15	60.76	41.33	99.99	77.32	61.06	38.50	99.73	78.29		60.80		39.47
21	99.70	80.11	60.77	41.29	100.00	77.29	61.07	38.47	99.78	78.32		60.85		39.50
22	99.78	80.02	60.85	41.20	99.92	77.39	60.99	38.57	99.72	78.30		60.79		39.48
23	99.98	79.86	61.05	41.04	99.99	77.47	61.06	38.65	99.75	78.28		60.82		39.46
24	99.85	79.98	60.92	41.16	99.91	77.96	60.98	39.14	99.73	78.16		60.80		39.34
25	99.77	80.08	60.84	41.26	100.04	78.37	61.11	39.55	99.85	78.11		60.92		39.29
26	99.58	80.09	60.65	41.27	99.76	78.43	60.83	39.61	99.48	78.14	1058.00	60.55	1059.31	39.32
27	99.43	80.07	60.50	41.25	99.78	78.27	60.85	39.45	99.63	78.16	58.12	60.70	59.43	39.34
28	99.70	80.08	60.77	41.26	99.99	78.25	61.06	39.43	99.46	78.18	57.96	60.53	59.27	39.36
29	99.81	79.96	60.88	41.14	99.88	78.42	60.95	39.60	99.45	78.13	57.98	60.52	59.29	39.31
30	99.84	79.92	60.91	41.10	99.88	78.52	60.95	39.70	99.53	78.15	58.06	60.60	59.37	39.33
31					99.84	78.58	60.91	39.76	99.48	78.03		60.55		39.21

* Local Datum.

TABLE 14—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN AND KEEWATIN, ONTARIO

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

SEPTEMBER

1913	Local Datum		W. P. S. Datum		Sea-level Datum.			
	Lake	River Bridge	Above Dam	Tail Water	Lake	Above Dam	Tail Water	River Bridge
1	99.55	78.03	1058.06	.....	1060.62	1059.37	.....	1039.21
2	99.45	78.02	.....	.....	60.52	.....	.....	39.20
3	99.40	78.02	57.92	.....	60.47	59.23	.....	39.20
4	99.45	78.03	.....	.....	60.52	.....	.....	39.21
5	99.40	78.01	57.92	.....	60.47	59.23	.....	39.19
6	99.32	78.02	.....	.....	60.39	.....	.....	39.20
7	99.35	77.92	.....	.....	60.42	.....	.....	39.10
8	99.30	77.88	.....	.....	60.37	.....	.....	39.06
9	99.64	77.99	58.11	.....	60.71	59.42	.....	39.17
10	99.33	78.02	.....	.....	60.40	.....	.....	39.20
11	99.30	78.05	.....	.....	60.37	.....	.....	39.23
12	99.19	78.02	.....	.....	60.26	.....	.....	39.20
13	99.15	78.02	.....	.....	60.22	.....	.....	39.20
14	99.47	77.94	.....	.....	60.54	.....	.....	39.12
15	99.20	77.93	.....	.....	60.27	.....	.....	39.11
16	99.10	78.01	.....	.....	60.17	.....	.....	39.19
17	99.12	78.02	.....	.....	60.19	.....	.....	39.20
18	99.30	78.07	.....	.....	60.37	.....	.....	39.25
19	99.37	78.14	.....	.....	60.44	.....	.....	39.32
20	98.60	78.03	57.32	.....	59.67	58.63	.....	39.21
21	98.52	77.74	57.42	.....	59.59	58.73	.....	38.92
22	98.98	77.55	57.87	.....	60.05	59.18	.....	38.73
23	99.00	77.14	58.29	.....	60.07	59.60	.....	38.32
24	98.71	76.77	58.25	.....	59.78	59.56	.....	37.95
25	99.90	76.63	58.27	.....	60.97	59.58	.....	37.81
26	99.98	76.50	58.26	.....	61.05	59.57	.....	37.68
27	99.02	76.24	58.54	.....	60.09	59.85	.....	37.42
28	99.08	75.69	58.52	.....	60.15	59.83	.....	36.87
29	98.85	75.40	58.37	.....	59.92	59.68	.....	36.58
30	98.99	75.48	58.50	.....	60.06	59.81	.....	36.66

OCTOBER

1	98.94	75.40	1058.42	.....	1060.01	1059.73	.....	1036.58
2	98.90	75.30	58.51	.....	59.97	59.82	.....	36.48
3	99.00	75.24	58.46	.....	60.07	59.77	.....	36.42
4	98.79	75.19	58.33	.....	59.86	59.64	.....	36.37
5	98.44	74.95	58.03	.....	59.51	59.34	.....	36.13
6	98.82	74.76	58.44	.....	59.89	59.75	.....	35.94
7	99.07	74.96	.....	.....	60.14	.....	.....	36.14
8	98.81	74.99	58.48	1035.00	59.88	59.79	1036.31	36.17
9	98.88	74.98	58.42	34.97	59.95	59.73	36.28	36.16
10	99.08	75.01	58.75	34.99	60.15	60.06	36.30	36.19
11	99.04	74.98	58.68	.....	60.11	59.99	.....	36.16
12	99.00	74.76	58.54	34.77	60.07	59.85	36.08	35.94
13	99.03	74.63	58.73	34.62	60.10	60.04	35.93	35.81
14	99.10	74.83	58.69	34.82	60.17	60.00	36.13	36.01
15	99.00	74.89	58.56	34.90	60.07	59.87	36.21	36.07
16	99.00	74.90	58.60	34.92	60.07	59.91	36.23	36.08
17	99.17	74.90	58.71	34.90	60.24	60.02	36.21	36.08
18	99.03	74.92	58.61	34.92	60.10	59.92	36.23	36.10
19	98.86	74.69	58.48	34.92	59.93	59.79	36.23	35.87
20	98.83	74.43	58.40	34.40	59.90	59.71	35.71	35.61
21	99.02	74.53	58.59	34.49	60.09	59.90	35.80	35.71
22	99.15	74.74	58.75	34.75	60.22	60.06	36.06	35.92
23	99.03	74.79	58.69	34.77	60.10	60.00	36.08	35.97
24	98.99	74.80	58.55	34.79	60.06	59.86	36.10	35.98
25	99.02	74.84	58.58	34.82	60.09	59.89	36.13	36.02
26	99.00	74.59	58.53	34.61	60.07	59.84	35.92	35.77
27	99.18	74.52	58.75	34.69	60.25	60.06	36.00	35.70
28	98.58	74.73	58.77	34.68	59.65	60.08	35.99	35.91
29	98.96	74.79	58.52	34.75	60.03	59.83	36.06	35.97
30	99.04	74.80	58.62	34.77	60.11	59.93	36.08	35.98
31	99.12	74.81	58.73	34.78	60.19	60.04	36.09	35.99

ADDITIONAL "ABOVE DAM" READINGS—1913—SEA LEVEL DATUM

Feb. 12—1059.98	Apr. 16—1060.55	May 21—1058.60	July 2—1058.60
Apr. 1—1060.36	Apr. 17—1060.60	June 26—1058.42	July 11—1060.13

TABLE 14—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN AND KEEWATIN, ONTARIO

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

NOVEMBER

1913	Local Datum		W. P. S. Datum		Sea-level Datum			
	Lake	River Bridge	Above Dam	Tail Water	Lake	Above Dam	Tail Water	River Bridge
1	99.16	74.82	1058.73	1034.79	1060.23	1060.04	1036.10	1036.00
2	99.20	74.57			60.27			35.75
3	98.92	74.49	58.57	34.40	59.99	59.88	35.71	35.67
4	99.10	74.69	58.74	34.68	60.17	60.05	35.99	35.87
5	99.26	74.75	58.79	34.72	60.33	60.10	36.03	35.93
6	99.03	74.75	58.63	34.71	60.10	59.94	36.02	35.93
7	98.88	74.79			59.95			35.97
8	98.88	74.82	58.56	34.78	59.95	59.87	36.09	36.00
9		74.60						35.78
10	98.91	74.52	58.52	34.38	59.98	59.83	35.69	35.70
11	99.18	74.70	58.75	34.62	60.25	60.06	35.93	35.88
12	98.99	74.77	58.52	34.69	60.06	59.83	36.00	35.95
13	99.06	74.80	58.57	34.72	60.13	59.88	36.03	35.98
14	99.00	74.82	58.62	34.74	60.07	59.93	36.05	36.00
15	99.01	74.82	58.65	34.72	60.08	59.96	36.03	36.00
16	99.23	74.60			60.30			35.78
17	99.05	74.70	58.63	34.71	60.12	59.94	36.02	35.88
18	98.90	74.73	58.49	34.67	59.97	59.80	35.98	35.91
19	99.10	74.79	58.66	34.70	60.17	59.97	36.01	35.97
20	99.07	74.82	58.67	34.73	60.14	59.98	36.04	36.00
21	98.96	74.82	58.57	34.76	60.03	59.88	36.07	36.00
22	98.99	74.82	58.56	34.82	60.06	59.87	36.13	36.00
23	99.19	74.59			60.26			35.77
24	99.02	74.49	58.53	34.44	60.09	59.84	35.75	35.67
25	98.99	74.70	58.46	34.69	60.06	59.77	36.00	35.88
26	98.97	74.77	58.53	34.72	60.04	59.84	36.03	35.95
27	99.09	74.78	58.67	34.76	60.16	59.98	36.07	35.96
28	99.00	74.79	58.57	34.69	60.07	59.88	36.00	35.97
29	99.04	74.82	58.65	34.83	60.11	59.96	36.14	36.00
30	99.05	74.57			60.12			35.75

DECEMBER

1	99.06	74.50	1058.67	1034.50	1060.13	1059.98	1035.81	1035.68
2	99.02	74.71	58.69	34.72	60.09	60.00	36.03	35.89
3	99.10	74.77	58.71	34.75	60.17	60.02	36.06	35.95
4	99.18	74.80	58.73	34.77	60.25	60.04	36.08	35.98
5	99.03	74.82	58.63	34.77	60.10	59.94	36.08	36.00
6	99.03	74.81	58.58	34.74	60.10	59.89	36.05	35.99
7	98.78	74.55	58.55	34.57	59.85	59.86	35.88	35.73
8	98.80	74.53	58.65	34.47	59.87	59.96	35.78	35.71
9	99.06	74.69	58.64	34.59	60.13	59.95	35.90	35.87
10	99.02	74.75	58.62	34.67	60.09	59.93	35.98	35.93
11	99.03	74.79	58.64	34.70	60.10	59.95	36.01	35.97
12	99.01	74.80	58.61	34.77	60.08	59.92	36.08	35.98
13	99.03	74.80	58.62	34.77	60.10	59.93	36.08	35.98
14	99.05	74.52	58.63	34.38	60.12	59.94	35.69	35.70
15	99.02	74.47	58.61	34.37	60.09	59.92	35.68	35.65
16	99.04	74.67	58.63	34.47	60.11	59.94	35.78	35.85
17	99.01	74.68	58.64	34.52	60.08	59.95	35.83	35.86
18	99.02	74.70	58.61	34.67	60.09	59.92	35.98	35.88
19	99.00	74.70	58.64	34.65	60.07	59.95	35.96	35.88
20	99.00	74.69	58.59	34.38	60.07	59.90	35.69	35.87
21	99.04	74.47	58.60	34.41	60.11	59.91	35.72	35.65
22	99.02	74.46	58.60	34.48	60.09	59.91	35.79	35.64
23	98.99	74.67	58.59	34.53	60.06	59.90	35.84	35.85
24	99.01	74.70	58.60	34.61	60.08	59.91	35.92	35.88
25	99.00	74.48	58.59	34.59	60.07	59.90	35.90	35.66
26	98.99	74.46	58.58	34.45	60.06	59.89	35.76	35.64
27	98.98	74.67	58.59	34.64	60.05	59.90	35.95	35.85
28	99.04	74.42	58.61	34.35	60.11	59.92	35.66	35.60
29	99.03	74.47	58.59	34.40	60.10	59.90	35.71	35.65
30	99.00	74.63	58.59	34.57	60.07	59.90	35.88	35.81
31	98.99	74.72	58.59	34.60	60.06	59.90	35.91	35.90

TABLE 14—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN AND KEEWATIN, ONTARIO

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

JANUARY

1914	Local Datum	W. P. S. Datum			Sea-level Datum			
	Lake	Above Dam	Tail Water	River Bridge	Lake	Above Dam	Tail Water	River Bridge
1	98.98	1058.59	1034.64	1034.62	1060.05	1059.90	1035.95	1035.93
2	98.98	58.57	34.72	34.65	60.05	59.88	36.03	35.96
3	98.99	58.54	34.67	34.67	60.06	59.85	35.98	35.98
4	99.02	58.56	34.52	34.48	60.09	59.87	35.83	35.79
5	99.01	58.59	34.39	34.36	60.08	59.90	35.70	35.67
6	98.98	58.59	34.55	34.45	60.05	59.90	35.86	35.76
7	98.99	58.57	34.54	34.47	60.06	59.88	35.85	35.78
8	98.98	58.58	34.56	34.51	60.05	59.89	35.87	35.82
9	98.99	58.58	34.65	34.58	60.06	59.89	35.96	35.89
10	98.99	58.57	34.70	34.65	60.06	59.88	36.01	35.96
11	99.04	58.58	34.47	34.47	60.11	59.89	35.78	35.78
12	98.99	58.56	34.42	34.40	60.06	59.87	35.73	35.71
13	98.91	58.54	34.60	34.52	59.98	59.85	35.91	35.83
14	98.98	58.57	34.67	34.62	60.05	59.88	35.98	35.93
15	98.99	58.50	34.63	34.63	60.06	59.81	35.94	35.94
16	98.97	58.51	34.67	34.64	60.04	59.82	35.98	35.95
17	98.99	58.54	34.60	34.58	60.06	59.85	35.91	35.89
18	99.01	58.57	34.40	34.35	60.08	59.88	35.71	35.66
19	98.99	58.52	34.40	34.24	60.06	59.83	35.71	35.55
20	98.97	58.53	34.48	34.42	60.04	59.84	35.79	35.73
21	98.99	58.60	34.47	34.48	60.06	59.91	35.78	35.79
22	98.99	58.59	34.42	34.41	60.06	59.90	35.73	35.72
23	99.00	58.57	34.55	34.35	60.07	59.88	35.86	35.66
24	99.01	58.60	34.46	34.34	60.08	59.91	35.77	35.65
25	99.00	58.59	34.37	34.19	60.07	59.90	35.68	35.50
26	99.00	58.57	34.33	34.21	60.07	59.88	35.64	35.52
27	98.99	58.53	34.47	34.45	60.06	59.84	35.78	35.76
28	98.98	58.54	34.50	34.50	60.05	59.85	35.81	35.81
29	99.01	58.55	34.60	34.53	60.08	59.86	35.91	35.84
30	99.01	58.59	34.62	34.54	60.08	59.90	35.93	35.85
31	99.02	58.60	34.47	34.55	60.09	59.91	35.78	35.86

FEBRUARY

1	99.03	1058.55	1034.24	1034.31	1060.10	1059.86	1035.55	1035.62
2	99.01	58.50	34.30	34.25	60.08	59.81	35.61	35.56
3	99.01	58.55	34.50	34.43	60.08	59.86	35.81	35.74
4	99.01	58.60	34.55	34.51	60.08	59.91	35.86	35.82
5	99.02	58.58	34.51	34.56	60.09	59.89	35.82	35.87
6	99.05	58.59	34.33	34.41	60.12	59.90	35.64	35.72
7	99.02	58.59	34.47	34.38	60.09	59.90	35.78	35.69
8	99.06	58.62	34.50	34.30	60.13	59.93	35.81	35.61
9	99.05	58.59	34.45	34.33	60.12	59.90	35.76	35.64
10	99.00	58.58	34.60	34.50	60.07	59.89	35.91	35.81
11	99.01	58.59	34.67	34.55	60.08	59.90	35.98	35.86
12	99.02	58.57	34.70	34.58	60.09	59.88	36.01	35.89
13	99.02	58.59	34.64	34.59	60.09	59.90	35.95	35.90
14	99.02	58.59	34.58	34.60	60.09	59.90	35.89	35.91
15	99.05	58.58	34.38	34.43	60.12	59.89	35.69	35.74
16	99.04	58.58	34.43	34.34	60.11	59.89	35.74	35.65
17	99.00	58.59	34.64	34.49	60.07	59.90	35.95	35.80
18	99.01	58.58	34.68	34.53	60.08	59.89	35.99	35.84
19	99.01	58.58	34.72	34.58	60.08	59.89	36.03	35.89
20	99.02	58.57	34.74	34.59	60.09	59.88	36.05	35.90
21	99.01	58.54	34.87	34.69	60.08	59.85	36.18	36.00
22	99.01	58.45	34.87	34.69	60.08	59.76	36.18	36.00
23	99.03	58.42	34.79	34.81	60.10	59.73	36.10	36.12
24	99.02	58.39	35.24	35.31	60.09	59.70	36.55	36.62
25	99.00	58.30	35.67	35.44	60.07	59.61	36.98	36.75
26	99.00	58.26	35.84	35.58	60.07	59.57	37.15	36.89
27	99.01	58.27	35.87	35.73	60.08	59.58	37.18	37.04
28	98.99	58.23	35.97	35.85	60.06	59.54	37.28	37.16

TABLE 14—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN AND KEEWATIN, ONTARIO

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

MARCH

1914	Local Datum	W. P. S. Datum			Sea-level Datum			
	Lake	Above Dam	Tail Water	River Bridge	Lake	Above Dam	Tail Water	River Bridge
1	99.01	1058.20	1035.62	1035.68	1060.08	1059.51	1036.93	1036.99
2	99.03	58.24	35.69	35.65	60.10	59.55	37.00	36.96
3	98.98	58.20	35.92	35.79	60.05	59.51	37.23	37.10
4	98.98	58.18	36.02	35.80	60.05	59.49	37.33	37.11
5	98.94	58.20	36.03	35.82	60.01	59.51	37.34	37.13
6	98.93	58.21	36.02	35.84	60.00	59.52	37.33	37.15
7	98.95	58.23	36.02	35.88	60.02	59.54	37.33	37.19
8	98.99	58.09	35.80	35.74	60.06	59.40	37.11	37.05
9	98.99	58.24	35.87	35.72	60.06	59.55	37.18	37.03
10	98.90	58.25	36.02	35.90	59.97	59.56	37.33	37.21
11	98.93	58.28	36.07	35.96	60.00	59.59	37.38	37.27
12	98.93	58.28	36.07	36.01	60.00	59.59	37.38	37.32
13	98.95	58.23	36.08	36.03	60.02	59.54	37.39	37.34
14	98.90	58.28	36.07	36.03	59.97	59.59	37.38	37.34
15	98.98	58.23	35.82	35.82	60.05	59.54	37.13	37.13
16	98.90	58.28	35.82	35.76	59.97	59.59	37.13	37.07
17	98.88	58.25	35.95	35.92	59.95	59.56	37.26	37.23
18	98.85	58.21	36.07	35.98	59.92	59.52	37.38	37.29
19	98.86	58.18	36.07	35.98	59.93	59.49	37.38	37.29
20	98.88	58.20	36.03	36.00	59.95	59.51	37.34	37.31
21	89.85	58.18	36.02	36.00	59.92	59.49	37.33	37.31
22	98.87	58.18	35.80	35.79	59.94	59.49	37.11	37.10
23	98.88	58.18	35.77	35.72	59.95	59.49	37.08	37.03
25	98.85	58.18	35.90	35.86	59.92	59.49	37.21	37.17
25	98.80	58.18	35.97	35.92	59.87	59.49	37.28	37.23
26	98.85	58.17	35.98	35.95	59.92	59.48	37.29	37.26
27	98.87	58.14	36.03	35.95	59.94	59.45	37.34	37.26
28	98.87	58.14	36.01	35.92	59.94	59.45	37.32	37.23
29	.....	58.14	35.82	35.78	.....	59.45	37.13	37.09
20	98.87	58.13	35.77	35.67	59.94	59.44	37.08	36.98
31	98.86	58.13	35.92	35.77	59.93	59.44	37.23	37.08

APRIL

1	98.87	1058.13	1035.92	1035.79	1059.94	1059.44	1037.23	1037.10
2	98.85	58.14	35.94	35.84	59.92	59.45	37.25	37.15
3	98.88	58.13	35.96	35.88	59.95	59.44	37.27	37.19
4	98.87	58.13	35.90	35.90	59.94	59.44	37.21	37.21
5	98.90	58.15	35.57	35.73	59.97	59.46	36.88	37.04
6	98.90	58.14	35.61	35.70	59.97	59.45	36.92	37.01
7	98.84	58.13	35.80	35.79	59.91	59.44	37.11	37.10
8	98.84	58.13	35.88	35.82	59.91	59.44	37.19	37.13
9	98.87	58.13	35.84	35.77	59.94	59.44	37.15	37.08
10	98.80	58.13	35.82	35.64	59.87	59.44	37.13	36.95
11	98.83	58.15	35.82	35.64	59.90	59.46	37.13	36.95
12	98.79	58.10	35.47	35.53	59.86	59.41	36.78	36.84
13	98.85	58.12	35.44	35.50	59.92	59.43	36.75	36.81
14	98.82	58.10	35.55	35.64	59.89	59.41	36.86	36.95
15	98.80	58.10	35.67	35.77	59.87	59.41	36.98	37.08
16	98.77	58.10	35.71	35.73	59.84	59.41	37.02	37.04
17	98.80	58.11	35.67	35.58	59.87	59.42	36.98	36.89
18	98.82	58.17	35.68	35.61	59.89	59.48	36.99	36.92
19	98.91	58.18	35.77	35.55	59.98	59.49	37.08	36.86
20	98.92	58.20	35.89	35.61	59.99	59.51	37.20	36.92
21	98.90	58.17	35.89	35.83	59.97	59.48	37.20	37.14
22	98.88	58.16	35.90	35.91	59.95	59.47	37.21	37.22
23	98.93	58.16	35.90	35.83	60.00	59.47	37.21	37.14
24	98.95	58.17	35.87	35.74	60.02	59.48	37.18	37.05
25	98.95	58.19	35.82	35.72	60.02	59.50	37.13	37.03
26	99.08	58.26	36.00	35.64	60.15	59.57	37.31	36.95
27	99.03	58.36	36.00	35.65	60.10	59.67	37.31	36.96
28	98.95	58.37	36.00	35.80	60.02	59.68	37.31	37.11
29	98.95	58.37	36.00	35.87	60.02	59.68	37.31	37.18
30	.....	58.36	36.00	35.95	.....	59.67	37.31	37.26

TABLE 14—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN AND KEEWATIN, ONTARIO

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

MAY

1914	Local Datum	W. P. S. Datum			Sea-level Datum			
	Lake.	Above Dam	Tail Water	River Bridge	Lake	Above Dam	Tail Water	River Bridge
1	99.11	1058.38	1036.10	1035.96	1060.18	1059.69	1037.41	1037.27
2	99.15	58.42	36.10	36.00	60.22	59.73	37.41	37.31
3	99.18	58.44	35.94	35.86	60.25	59.75	37.25	37.17
4	99.22	58.47	35.90	35.86	60.29	59.78	37.21	37.17
5	99.23	58.50	36.15	36.04	60.30	59.81	37.46	37.35
6	99.29	58.54	36.33	36.15	60.36	59.85	37.64	37.46
7	99.30	58.57	36.43	36.32	60.37	59.88	37.74	37.63
8	99.40	58.59	36.50	36.40	60.47	59.90	37.81	37.71
9	99.45	58.63	36.58	36.38	60.52	59.94	37.89	37.69
10	.....	58.63	36.47	36.23	.....	59.94	37.78	37.54
11	99.38	58.61	36.49	36.22	60.45	59.92	37.80	37.53
12	99.45	58.60	36.58	36.40	60.52	59.91	37.89	37.71
13	99.43	58.60	36.69	36.47	60.50	59.91	38.00	37.78
14	99.43	58.66	36.70	36.50	60.50	59.97	38.01	37.81
15	99.50	58.73	36.68	36.52	60.57	60.04	37.99	37.83
16	99.53	58.77	36.65	36.45	60.60	60.08	37.96	37.76
17	99.63	58.80	36.42	36.21	60.70	60.11	37.73	37.52
18	99.63	58.77	36.44	36.31	60.70	60.08	37.75	37.62
19	99.50	58.77	36.59	36.47	60.57	60.08	37.90	37.78
20	99.62	58.80	36.73	36.57	60.69	60.11	38.04	37.88
21	99.63	58.66	36.89	36.79	60.70	59.97	38.20	38.10
22	99.65	58.50	37.40	37.25	60.72	59.81	38.71	38.56
23	99.66	58.54	37.50	37.33	60.73	59.85	38.81	38.64
24	99.79	58.59	37.30	37.20	60.86	59.90	38.61	38.51
25	99.85	58.59	37.45	37.30	60.92	59.90	38.76	38.61
26	99.81	58.57	37.62	37.53	60.88	59.88	38.93	38.84
27	99.80	58.45	37.85	37.87	60.87	59.76	39.16	39.18
28	99.80	58.28	38.22	38.25	60.87	59.59	39.53	39.56
29	99.80	58.23	38.57	38.48	60.87	59.54	39.88	39.79
30	99.91	58.20	38.76	38.66	60.98	59.51	40.07	39.97
31	.....	58.13	38.66	38.66	.....	59.44	39.97	39.97

JUNE

1	99.95	1058.18	1038.62	1038.55	1061.02	1059.49	1039.93	1039.86
2	100.00	58.21	38.79	38.72	61.07	59.52	40.10	40.03
3	99.93	58.23	39.10	39.05	61.00	59.54	40.41	40.36
4	99.83	58.27	39.16	39.07	60.90	59.58	40.47	40.38
5	100.00	58.29	39.19	39.10	61.07	59.60	40.50	40.41
6	99.92	58.23	39.12	39.06	60.99	59.54	40.43	40.37
7	99.98	58.22	39.17	38.89	61.05	59.53	40.48	40.20
8	99.99	58.22	39.27	38.99	61.06	59.53	40.58	40.30
9	100.10	58.24	39.50	39.33	61.17	59.55	40.81	40.64
10	100.20	58.34	39.56	39.48	61.27	59.65	40.87	40.79
11	100.15	58.34	39.59	39.48	61.22	59.65	40.90	40.79
12	100.20	58.33	39.59	39.50	61.27	59.64	40.90	40.81
13	100.20	58.36	39.59	39.54	61.27	59.67	40.90	40.85
14	100.22	58.39	39.47	39.39	61.29	59.70	40.78	40.70
15	100.20	58.31	39.44	39.35	61.27	59.62	40.75	40.66
16	100.25	58.26	39.67	39.50	61.32	59.57	40.98	40.81
17	100.32	58.16	39.72	39.52	61.39	59.47	41.03	40.83
18	100.02	58.11	39.79	39.55	61.09	59.42	41.10	40.86
19	100.18	58.17	39.78	39.68	61.25	59.48	41.09	40.99
20	100.40	58.19	39.73	39.83	61.47	59.50	41.04	41.14
21	100.10	58.20	39.69	39.73	61.17	59.51	41.00	41.04
22	100.30	58.20	39.67	39.59	61.37	59.51	40.98	40.90
23	100.32	58.15	39.85	39.79	61.39	59.46	41.16	41.10
24	100.10	57.90	40.02	39.90	61.17	59.21	41.33	41.21
25	100.01	57.66	40.12	40.02	61.08	58.97	41.43	41.33
26	100.05	57.55	40.14	40.15	61.12	58.86	41.45	41.46
27	99.92	57.58	40.08	40.13	60.99	58.89	41.39	41.44
28	100.10	58.60	40.13	40.02	61.17	58.91	41.44	41.33
29	100.10	58.60	40.13	39.98	61.17	58.91	41.44	41.29
30	100.10	58.60	40.09	40.05	61.17	58.91	41.40	41.36

TABLE 14—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN AND KEEWATIN, ONTARIO

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

JULY

1914	Local Datum	W. P. S. Datum			Sea-level Datum			
	Lake	Above Dam	Tail Water	River Bridge	Lake	Above Dam	Tail Water	River Bridge
1	100.00	1057.60	1040.11	1040.01	1061.07	1058.91	1041.42	1041.32
2	100.12	57.60	40.11	39.85	61.19	58.91	41.42	41.16
3	100.15	57.53	40.11	39.90	61.22	58.84	41.42	41.21
4	100.15	57.48	40.07	39.90	61.22	58.79	41.38	41.21
5	100.01	57.42	39.88	39.87	61.08	58.73	41.19	41.18
6	100.18	57.40	39.89	39.86	61.25	58.71	41.20	41.17
7	99.80	57.39	39.97	39.93	60.87	58.70	41.28	41.24
8	100.06	57.43	40.03	40.07	61.13	58.74	41.34	41.38
9	100.08	57.46	40.07	40.14	61.15	58.77	41.38	41.45
10	99.91	57.50	40.11	40.12	60.98	58.81	41.42	41.43
11	100.00	57.50	40.11	40.11	61.07	58.81	41.42	41.42
12	100.20	57.50	39.86	40.00	61.27	58.81	41.17	41.31
13	100.00	57.53	39.96	39.98	61.07	58.84	41.27	41.29
14	100.02	57.59	40.15	40.14	61.09	58.90	41.46	41.45
15	100.22	57.61	40.26	40.19	61.29	58.92	41.57	41.50
16	100.30	57.60	40.30	40.23	61.37	58.91	41.61	41.54
17	99.82	57.58	40.31	40.28	60.89	58.89	41.62	41.59
18	100.15	57.57	40.29	40.30	61.22	58.88	41.60	41.61
19	100.18	57.57	40.06	40.13	61.25	58.88	41.37	41.44
20	100.18	57.58	40.08	40.07	61.25	58.89	41.39	41.38
21	100.10	57.57	40.12	40.19	61.17	58.88	41.43	41.50
22	99.98	57.54	40.12	40.22	61.05	58.85	41.43	41.53
23	100.04	57.52	40.11	40.24	61.11	58.83	41.42	41.55
24	100.01	57.50	40.08	40.24	61.08	58.81	41.39	41.55
25	100.01	57.50	39.97	40.13	61.08	58.81	41.28	41.44
26	100.10	57.46	39.88	39.92	61.17	58.77	41.19	41.23
27	99.98	57.42	39.92	39.88	61.05	58.73	41.23	41.19
28	100.00	57.39	40.11	40.06	61.07	58.70	41.42	41.37
29	100.08	57.39	40.11	40.10	61.15	58.70	41.42	41.41
30	100.00	57.38	40.08	40.12	61.07	58.69	41.39	41.43
31	99.83	57.38	40.05	40.12	60.90	58.69	41.36	41.43

AUGUST

1	99.85	1057.38	1040.00	1039.99	1060.92	1058.69	1041.31	1041.30
2	99.85	57.38	39.76	39.76	60.92	58.69	41.07	41.07
3	99.96	57.36	39.86	39.80	61.03	58.67	41.17	41.11
4	99.82	57.32	40.06	39.95	60.89	58.63	41.37	41.26
5	99.84	57.30	40.11	40.00	60.91	58.61	41.42	41.31
6	99.55	57.30	40.08	39.91	60.62	58.61	41.39	41.22
7	99.68	57.29	40.08	39.88	60.74	58.60	41.39	41.19
8	99.63	57.25	40.08	39.88	60.70	58.56	41.39	41.19
9	99.69	57.25	39.71	39.70	60.76	58.56	41.02	41.01
10	99.35	57.24	39.78	39.60	60.42	58.55	41.09	40.91
11	99.53	57.21	39.86	39.69	60.60	58.52	41.17	41.00
12	99.58	57.20	39.90	39.71	60.65	58.51	41.21	41.02
13	99.44	57.20	39.87	39.71	60.51	58.51	41.18	41.02
14	99.39	57.20	39.78	39.68	60.46	58.51	41.09	40.99
15	99.50	57.20	39.69	39.67	60.57	58.51	41.00	40.98
16	99.46	57.20	39.47	39.53	60.53	58.51	40.78	40.84
17	99.41	57.23	39.49	39.43	60.48	58.54	40.80	40.74
18	99.35	57.03	39.61	39.55	60.42	58.34	40.92	40.86
19	99.34	57.01	39.61	39.60	60.41	58.32	40.92	40.91
20	99.31	57.01	39.57	39.62	60.38	58.32	40.88	40.93
21	99.30	56.97	39.55	39.66	60.37	58.28	40.86	40.97
22	99.30	56.94	39.54	39.67	60.37	58.25	40.85	40.98
23	99.06	56.91	39.45	39.44	60.13	58.22	40.76	40.75
24	99.19	56.87	39.51	39.34	60.26	58.18	40.82	40.65
25	99.14	56.86	39.53	39.43	60.21	58.17	40.84	40.74
26	99.20	57.25	39.29	39.12	60.27	58.56	40.60	40.43
27	99.28	57.86	38.98	38.64	60.35	59.17	40.29	39.95
28	99.38	58.27	38.53	38.24	60.45	59.58	39.84	39.55
29	99.35	58.64	38.36	38.09	60.42	59.95	39.67	39.40
30	99.30	58.23	37.96	37.89	60.37	59.54	39.27	39.20
31	99.30	58.23	38.12	37.77	60.37	59.54	39.43	39.08

TABLE 14—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN AND KEEWATIN, ONTARIO

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

SEPTEMBER

1914	Local Datum	W. P. S. Datum			Sea-level Datum			
	Lake	Above Dam	Tail Water	River Bridge	Lake	Above Dam	Tail Water	River Bridge
1	99.29	1058.24	1037.80	1037.69	1060.36	1059.55	1039.11	1039.00
2	99.32	58.28	37.85	37.65	60.39	59.59	39.16	38.96
3	98.91	58.30	37.79	37.48	59.98	59.61	39.10	38.79
4	99.20	58.35	37.77	37.41	60.27	59.66	39.08	38.72
5	99.13	58.41	37.73	37.37	60.20	59.72	39.04	38.68
6	99.09	58.46	37.50	37.32	60.16	59.77	38.81	38.63
7	99.14	58.51	37.64	37.31	60.21	59.82	38.95	38.62
8	99.15	58.54	37.54	37.32	60.22	59.85	38.85	38.63
9	99.28	58.59	.....	37.35	60.35	59.90	.....	38.66
10	99.25	58.62	.....	37.41	60.32	59.93	.....	38.72
11	99.21	58.65	.....	37.35	60.28	59.96	.....	38.66
12	99.36	58.62	.....	37.36	60.43	59.93	.....	38.67
13	99.55	58.53	.....	37.25	60.62	59.84	.....	38.56
14	99.30	58.45	.....	37.24	60.37	59.76	.....	38.55
15	99.35	58.39	37.66	37.37	60.42	59.70	38.97	38.68
16	99.31	58.32	37.64	37.42	60.38	59.63	38.95	38.73
17	99.34	58.28	37.61	37.42	60.41	59.59	38.92	38.73
18	99.44	58.29	37.62	37.42	60.51	59.60	38.93	38.73
19	99.49	58.29	37.63	37.49	60.56	59.60	38.94	38.80
20	99.48	58.31	.....	37.45	60.55	59.62	.....	38.76
21	99.36	58.31	.....	37.38	60.43	59.62	.....	38.69
22	99.20	58.32	.....	37.43	60.27	59.63	.....	38.74
23	99.39	58.34	.....	37.47	60.46	59.65	.....	38.78
24	99.23	58.35	37.52	37.45	60.30	59.66	38.83	38.76
25	99.42	58.37	37.63	37.48	60.49	59.68	38.94	38.79
26	99.35	58.38	37.65	37.48	60.42	59.69	38.96	38.79
27	99.43	58.40	37.25	37.23	60.50	59.71	38.56	38.54
28	99.40	58.40	37.25	37.10	60.47	59.71	38.56	38.41
29	99.32	58.40	37.37	37.28	60.39	59.71	38.68	38.59
30	99.40	58.40	37.41	37.31	60.47	59.71	38.72	38.62

OCTOBER

1	99.44	1058.40	1037.46	1037.39	1060.51	1059.71	1038.77	1038.70
2	99.43	58.39	37.50	37.38	60.50	59.70	38.81	38.69
3	99.40	58.35	37.50	37.38	60.47	59.66	38.81	38.69
4	99.35	58.31	37.21	37.23	60.42	59.62	38.52	38.54
5	99.32	58.30	37.27	37.11	60.39	59.61	38.58	38.42
6	99.35	58.31	37.31	37.21	60.42	59.62	38.62	38.52
7	99.28	58.32	37.27	37.23	60.35	59.63	38.58	38.54
8	99.30	58.47	37.18	37.23	60.37	59.78	38.49	38.54
9	99.35	58.64	37.10	37.26	60.42	59.95	38.41	38.57
10	99.27	58.82	36.95	37.33	60.34	60.13	38.26	38.64
11	99.40	58.90	36.81	37.34	60.47	60.21	38.12	38.65
12	99.34	58.93	36.73	37.16	60.41	60.24	38.04	38.47
13	99.46	58.95	36.70	37.18	60.53	60.26	38.01	38.49
14	99.69	59.00	36.67	37.22	60.76	60.31	37.98	38.53
15	99.45	59.05	36.61	36.63	60.52	60.36	37.92	37.94
16	99.60	59.05	36.60	36.40	60.67	60.36	37.91	37.71
17	99.47	58.88	36.33	36.24	60.54	60.19	37.64	37.55
18	99.72	58.98	36.07	36.02	60.79	60.29	37.38	37.33
19	99.59	58.93	36.18	35.89	60.66	60.24	37.49	37.20
20	99.58	58.98	36.20	36.03	60.65	60.29	37.51	37.34
21	99.55	58.93	36.41	36.05	60.62	60.24	37.72	37.36
22	99.61	58.92	36.45	36.06	60.68	60.23	37.76	37.37
23	99.33	58.83	36.20	36.01	60.40	60.14	37.51	37.32
24	99.68	59.00	36.20	35.92	60.75	60.31	37.51	37.23
25	99.45	58.80	35.85	35.73	60.52	60.11	37.16	37.04
26	99.36	58.83	35.77	35.52	60.43	60.14	37.08	36.83
27	99.75	58.92	35.87	35.69	60.82	60.23	37.18	37.00
28	99.48	58.98	35.83	35.72	60.55	60.29	37.14	37.03
29	99.57	58.97	35.85	35.76	60.64	60.28	37.16	37.07
30	99.67	58.99	35.90	35.86	60.74	60.30	37.21	37.17
31	99.65	59.01	35.90	35.86	60.72	60.32	37.21	37.17

* TABLE 14—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN AND KEEWATIN, ONTARIO

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

NOVEMBER

1914	Local Datum	W. P. S. Datum			Sea-level Datum			
	Lake	Above Dam	Tail Water	River Bridge	Lake	Above Dam	Tail Water	River Bridge
1	99.52	1058.87	1035.67	1035.57	1060.59	1060.18	1036.98	1036.88
2	99.79	58.85	35.68	35.49	60.86	60.16	36.99	36.80
3	99.69	58.85	35.74	35.57	60.76	60.16	37.05	36.88
4	99.46	58.85	35.81	35.55	60.53	60.16	37.12	36.86
5	99.52	58.87	35.82	35.51	60.59	60.18	37.13	36.82
6	99.76	58.86	35.75	35.52	60.83	60.17	37.06	36.83
7	99.41	58.82	35.68	35.51	60.48	60.13	36.99	36.82
8	99.74	58.87	35.51	35.42	60.81	60.18	36.82	36.73
9	99.80	59.15	35.77	35.46	60.87	60.46	37.08	36.77
10	99.61	59.13	35.82	35.63	60.68	60.44	37.13	36.94
11	99.52	59.10	35.82	35.65	60.59	60.41	37.13	36.96
12	99.59	59.07	35.82	35.67	60.66	60.38	37.13	36.98
13	99.60	59.05	35.82	35.71	60.67	60.36	37.13	37.02
14	99.52	59.12	35.82	35.73	60.59	60.43	37.13	37.04
15	99.50	59.17	35.72	35.59	60.57	60.48	37.03	36.90
16	99.51	59.13	35.80	35.53	60.58	60.44	37.11	36.84
17	99.60	58.95	35.92	35.68	60.67	60.26	37.23	36.99
18	99.58	58.87	36.12	35.70	60.65	60.18	37.43	37.01
19	99.57	59.10	35.97	35.67	60.64	60.41	37.28	36.98
20	99.65	59.00	36.07	35.69	60.72	60.31	37.38	37.00
21	99.49	58.95	35.95	35.69	60.56	60.26	37.26	37.00
22	99.67	59.05	35.70	35.56	60.74	60.36	37.01	36.87
23	99.72	59.03	35.71	35.49	60.79	60.34	37.02	36.80
24	99.65	59.00	35.82	35.62	60.72	60.31	37.13	36.93
25	99.68	59.00	35.86	35.68	60.75	60.31	37.17	36.99
26	99.60	59.00	35.82	35.70	60.67	60.31	37.13	37.01
27	99.65	59.00	35.82	35.71	60.72	60.31	37.13	37.02
28	99.65	59.00	35.82	35.70	60.72	60.31	37.13	37.01
29	99.69	59.00	35.60	35.50	60.76	60.31	36.91	36.81
30	99.65	59.00	35.62	35.51	60.72	60.31	36.93	36.82

DECEMBER

1	99.62	1059.00	1035.92	1035.70	1060.69	1060.31	1037.23	1037.01
2	99.68	58.99	35.97	35.75	60.75	60.30	37.28	37.05
3	99.65	58.97	36.00	35.77	60.72	60.28	37.31	37.08
4	99.62	58.93	35.97	35.77	60.69	60.24	37.28	37.08
5	99.68	58.97	35.79	35.79	60.75	60.28	37.10	37.10
6	99.70	59.00	35.56	35.73	60.77	60.31	36.87	37.04
7	99.69	59.00	35.80	35.56	60.76	60.31	37.11	36.87
8	99.62	58.96	35.72	35.64	60.69	60.27	37.03	36.95
9	99.68	58.97	35.72	35.62	60.75	60.28	37.03	36.93
10	99.70	59.00	35.73	35.61	60.77	60.31	37.04	36.92
11	99.70	59.00	35.72	35.61	60.77	60.31	37.03	36.92
12	99.72	59.09	35.72	35.68	60.79	60.40	37.03	36.99
13	99.69	59.00	35.97	35.53	60.76	60.31	37.28	36.84
14	99.69	59.00	35.97	35.51	60.76	60.31	37.28	36.82
15	99.70	59.00	35.77	35.63	60.77	60.31	37.08	36.94
16	99.72	59.00	35.72	35.64	60.79	60.31	37.03	36.95
17	99.72	59.05	35.77	35.65	60.79	60.36	37.08	36.96
18	99.72	59.01	35.67	35.60	60.79	60.32	36.98	36.91
19	99.73	58.95	35.75	35.61	60.80	60.26	37.06	36.92
20	99.70	59.17	35.85	35.49	60.77	60.48	37.16	36.80
21	99.75	59.10	35.65	35.47	60.82	60.41	36.96	36.78
22	99.72	59.10	35.70	35.60	60.79	60.41	37.01	36.91
23	99.75	59.10	35.70	35.60	60.82	60.41	37.01	36.91
24	99.70	59.00	35.67	35.61	60.77	60.31	36.98	36.91
25	99.72	59.10	35.65	35.55	60.79	60.41	36.96	36.86
26	99.70	59.10	35.70	35.51	60.77	60.41	37.01	36.82
27	99.73	59.10	35.63	35.42	60.80	60.41	36.94	36.73
28	99.73	59.11	35.56	35.45	60.80	60.42	36.87	36.76
29	99.69	59.14	35.71	35.56	60.76	60.45	37.02	36.87
30	99.70	59.10	35.70	35.63	60.77	60.41	37.01	36.94
31	99.69	59.10	35.70	35.65	60.76	60.41	37.01	36.96

* For 1915 records see page 302.

TABLE 15

WATER LEVELS—LAKE OF THE WOODS—WARROAD, MINN.

RECORDS OF INTERNATIONAL BOUNDARY COMMISSION

1912	June						July						August					
	Footnote	Gauge Height				Sea-level Datum	Footnote	Gauge Height				Sea-level Datum	Footnote	Gauge Height				Sea-level Datum
		7 a.m.	12 m.	6 p.m.	Mean			7 a.m.	12 m.	6 p.m.	Mean			7 a.m.	12 m.	6 p.m.	Mean	
1		3.90				1058.50		4.25	4.30	4.25	4.27	1058.87		4.80	4.80	4.90	4.83	1059.43
2		4.10				58.70		4.15	4.20	4.20	4.18	58.78		4.90	4.75	4.80	4.82	59.42
3		3.70				58.30		4.25	4.30	4.30	4.28	58.88		4.75	4.75	4.75	4.75	59.35
4		4.00				58.60		4.35	4.35	4.40	4.37	58.97		4.70	4.80	4.80	4.77	59.37
5		4.00				58.60		4.40	4.45	4.45	4.43	59.03		4.75	4.75	4.75	4.75	59.35
6		4.30				58.90		4.20	4.15	4.20	4.18	58.78		4.75	4.75	4.85	4.78	59.38
7		4.10				58.70		4.20	4.30	3.95	4.15	58.75		4.85	4.95	4.95	4.92	59.52
8		4.20				58.80		4.45	4.50	4.70	4.55	59.15		5.05	5.00	5.00	5.02	59.62
9		4.00				58.60		4.70	4.65	4.60	4.65	59.25		5.00	5.00	5.00	5.00	59.60
10		4.00	4.00	4.10	4.03	58.63		4.50	4.50	4.49	4.47	59.07		5.00	5.00	5.00	5.00	59.60
11		4.40	4.40	4.30	4.37	58.97		4.20	4.35	4.45	4.33	58.93		4.95	4.95	4.95	4.95	59.55
12		4.20	4.20	4.20	4.20	58.80		4.45	4.55	4.50	4.50	59.10		4.80	4.70	4.55	4.68	59.28
13		4.20	4.20	4.20	4.20	58.80		4.45	4.40	4.40	4.42	59.03		4.65	4.60	4.75	4.67	59.27
14		4.20	4.30	4.30	4.27	58.87		4.05	4.20	4.20	4.15	58.75		5.00	5.00	5.00	5.00	59.60
15		4.50	4.70	4.40	4.53	59.13		4.40	4.35	4.30	4.35	58.95		4.85	4.90	5.00	4.92	59.52
16		4.00	3.90	3.70	3.87	58.47		3.95	4.30	4.35	4.20	58.80		5.00	4.95	5.00	4.98	59.58
17		4.30	4.20	4.20	4.23	58.83		4.50	4.45	4.50	4.48	59.08		5.05	5.00	5.00	5.02	59.62
18		4.20	4.10	4.20	4.17	58.77		4.50	4.40	4.45	4.45	59.05		5.00	5.00	5.00	5.00	59.60
19		4.20	4.20	4.30	4.23	58.83		4.25	4.35	4.25	4.28	58.88		4.90	5.00	5.05	4.98	59.58
20		4.20	4.20	4.20	4.20	58.80		4.50	4.50	4.55	4.52	59.12		4.95	4.95	4.85	4.92	59.52
21		4.20	4.20	4.10	4.17	58.77		4.50	4.50	4.55	4.52	59.12		4.70	4.85	4.85	4.80	59.40
22		4.10	4.00	4.10	4.07	58.67		4.55	4.45	4.60	4.53	59.13		4.85	5.00	4.90	4.92	59.52
23		4.20	4.20	4.10	4.17	58.77		4.60	4.45	4.55	4.53	59.13		4.90	4.90	5.00	4.93	59.53
24		4.10	4.00	4.20	4.10	58.70		4.45	4.30	4.45	4.40	59.00		5.05	4.95	5.00	5.00	59.60
25		4.30	4.30	4.30	4.30	58.90		4.55	4.55	4.60	4.57	59.17		5.00	5.00	5.25	5.08	59.68
26		4.20	4.20	4.20	4.20	58.80		4.65	4.65	4.40	4.57	59.17		5.05	5.05	5.00	5.03	59.63
27		4.10	4.10	4.20	4.13	58.73		4.40	4.40	4.50	4.43	59.03		4.90	5.00	5.05	4.98	59.58
28		4.20	4.20	4.20	4.20	58.80		4.65	4.65	4.60	4.63	59.23		5.05	5.00	5.05	5.03	59.63
29	1	4.20	4.20	4.20	4.20	58.80		4.65	4.65	5.00	4.77	59.37		5.00	5.10	5.05	5.05	59.65
30		4.25	4.30	4.40	4.32	58.92		4.80	4.75	4.70	4.75	59.35		5.00	4.90	5.00	4.96	59.56
31								4.70	4.85	4.80	4.78	59.38		5.00	5.00	5.00	5.00	59.60

Date	September, 1912					October, 1912					April, 1913					
1	5.00	5.00	4.95	4.98	1059.58	5.95	5.90	5.85	5.90	1060.50						
2	5.00	5.05	5.00	5.02	59.62	5.85	5.85	5.85	5.85	60.45						
3	5.00	5.05	4.90	4.98	59.58	5.85	5.85	5.90	5.87	60.47						
4	5.25	5.15	5.05	5.15	59.75	5.90	6.00	6.00	5.97	60.57						
5	5.25	5.15	5.10	5.17	59.77	6.00	6.00	6.10	6.03	60.63						
6	4.90	4.40	4.55	4.62	59.22	6.15	6.05	6.00	6.07	60.67						
7	5.05	5.05	5.00	5.03	59.63	5.75	5.60	5.90	5.73	60.35						
8	5.30	5.35	5.30	5.32	59.92	5.90	6.05	6.00	5.98	60.58						
9	5.10	5.20	5.20	5.17	59.77	6.55	6.55	6.50	6.53	61.13						
10	5.20	5.15	5.15	5.17	59.77	6.20	6.10	6.15	6.15	60.75						
11	5.00	5.00	5.00	5.00	59.60	6.10	6.10	6.10	6.10	60.70						
12	5.10	5.15	5.10	5.12	59.72	6.05	5.95	6.00	6.00	60.60						
13	5.25	5.30	5.30	5.28	59.88	6.00	6.00	6.00	6.00	60.60						
14	5.30	5.25	5.60	5.38	59.98	6.10	6.20	6.25	6.18	60.78						
15	5.65	5.50	5.45	5.53	60.13	6.05	6.05	6.10	6.07	60.67						
16	5.35	5.40	5.35	5.37	59.97	5.90	6.00	6.00	5.97	60.57						
17	5.40	5.35	5.30	5.35	59.95	6.15	6.20	6.20	6.18	60.78						
18	5.25	5.35	5.35	5.32	59.92	6.00	5.95	5.45	5.80	60.40						
19	5.35	5.35	5.35	5.35	59.95	6.05	6.20	6.20	6.15	60.75						
20	5.70	5.75	5.40	5.62	60.22	6.15	6.10	6.10	6.12	60.72						
21	5.60	5.40	5.40	5.46	60.06	6.05	6.20	6.20	6.15	60.75						
22	5.30	5.25	5.25	5.27	59.87	6.20	6.20	6.20	6.20	60.80						
23	5.50	5.60	5.85	5.65	60.25	6.05	6.00	6.20	6.08	60.68						
24	6.35	6.35	6.30	6.33	60.93	5.95	6.05	6.10	6.03	60.63						
25	6.10	6.10	6.05	6.08	60.68	6.05	6.05	6.00	6.03	60.63						
26	5.60	5.65	5.70	5.65	60.25	6.15	6.15	6.15	6.15	60.75						
27	5.70	5.65	5.65	5.67	60.27	6.20	6.20	6.20	6.20	60.80						
28	5.75	5.85	5.80	5.80	60.40	2	6.60	7.20	6.90	61.50	4	6.50			6.50	1061.10
29	5.60	5.50	5.45	5.52	60.12	3	6.80		6.80	61.40			6.45	6.50	6.47	61.07
30	5.75	5.90	5.90	5.85	60.45		6.20	6.20	6.25	6.22	60.82		6.48	6.48	6.48	6.48	61.08
31							6.10	6.25	6.30	6.22	60.82						

1. 7 p. m., 6.3, and 8.30 p. m., 5.3. Very strong NE. wind, going down. 2. 1 p. m., 6.60. 3. 10 a. m., 6.80. 4. 3 p. m., 6.50.

TABLE 15—Continued

WATER LEVELS—LAKE OF THE WOODS—WARROAD, MINN.

RECORDS OF INTERNATIONAL BOUNDARY COMMISSION

1913	May						June						July					
	Footnote	Gauge Height 8 a. m.	12 m.	6 p. m.	Mean	Sea-level Datum	Footnote	Gauge Height 7 a. m.	12 m.	6 p. m.	Mean	Sea-level Datum	Footnote	Gauge Height 7 a. m.	12 m.	6 p. m.	Mean	Sea-level Datum
1		6.55	6.58	6.53	6.55	1061.15	7	6.55	6.50	6.55	6.53	1061.13		6.10	6.20	6.30	6.20	1060.80
2	1	6.63	6.60	6.62	6.62	61.22		6.45	6.55	7.02	6.67	61.27		6.20	6.20	6.25	6.22	60.82
3	2	6.60	6.40	6.51	6.50	61.10		6.55	6.60	6.45	6.53	61.13		5.65	5.85	5.85	5.78	60.38
4	1	6.45	6.50	6.50	6.48	61.08		6.15	6.45	6.50	6.37	60.97		6.30	6.30	6.50	6.37	60.97
5	3	6.55	6.53	6.50	6.53	61.13	8	6.50	6.45	6.55	6.50	61.10		6.35	6.15	6.30	6.27	60.87
6	1	6.55	6.55	6.61	6.57	61.17		6.95	6.75	6.75	6.82	61.42		6.25	6.25	6.25	6.25	60.85
7	3	6.60	6.57	6.61	6.59	61.19		6.70	6.60	6.60	6.63	61.23		6.25	6.25	6.25	6.25	60.85
8	1	6.72	6.60	6.65	6.66	61.26		6.60	6.65	6.65	6.63	61.23	9	6.15	5.95	6.00	6.03	60.63
9	3	6.62	6.58	6.60	6.60	61.20		6.45	6.40	6.50	6.45	61.05		6.35	6.30	6.20	6.28	60.88
10	4	6.55	6.62	6.60	6.59	61.19		6.20	6.30	6.45	6.32	60.92		6.00	6.10	6.15	6.08	60.68
11	5	6.35	6.38	6.50	6.41	61.01		6.20	6.10	6.40	6.23	60.83		6.10	6.30	6.40	6.28	60.88
12		6.35	6.61	6.52	6.49	61.09		6.45	6.20	6.45	6.37	60.97		6.25	6.25	6.60	6.37	60.97
13		6.73	8.85	6.70	6.76	61.36		6.52	6.60	6.50	6.54	61.14		6.45	6.40	6.40	6.42	61.02
14		6.68	6.80	6.75	6.74	61.34		6.45	6.50	6.50	6.48	61.08		6.45	6.45	6.50	6.47	61.07
15		6.62	6.62	6.60	6.61	61.21		6.40	6.10	6.30	6.27	60.87		6.30	6.30	6.40	6.33	60.93
16		6.53	6.70	6.60	6.61	61.21		6.35	6.40	6.50	6.42	61.02		6.30	6.35	6.40	6.35	60.95
17		6.57	6.50	6.48	6.52	61.12		6.50	6.55	6.50	6.52	61.12		6.40	6.40	6.35	6.38	60.98
18	6	6.53	6.58	6.60	6.57	61.17		6.50	6.55	6.50	6.52	61.12		6.35	6.35	6.50	6.40	61.00
19		6.62	6.60	6.58	6.60	61.20		6.50	6.50	6.50	6.50	61.10		6.50	6.50	6.55	6.52	61.12
20		6.55	6.65	6.70	6.63	61.23		6.50	6.50	6.45	6.48	61.08		6.35	6.40	6.40	6.38	60.98
21		6.85	6.81	6.58	6.75	61.35		6.45	6.50	6.40	6.45	61.05		6.20	6.10	6.40	6.23	60.83
22		6.50	6.50	6.52	6.51	61.11		6.35	6.40	6.35	6.37	60.97		6.45	6.40	6.40	6.42	61.02
23	2	6.45	6.50	6.55	6.50	61.10		5.85	6.25	6.15	6.08	60.68		6.60	6.60	6.55	6.58	61.18
24	2	6.85	6.65	6.60	6.70	61.30		6.20	6.20	6.25	6.22	60.82		6.50	6.40	6.40	6.43	61.03
25		6.55	6.45	6.50	6.50	61.10		6.05	6.05	6.15	6.08	60.68		6.40	6.35	6.30	6.35	60.95
26	2	6.60	6.40	6.50	6.50	61.10		6.30	6.35	6.75	6.47	61.07		6.50	6.35	6.30	6.38	60.98
27	2	6.55	6.50	6.50	6.52	61.12		6.70	6.50	6.60	6.60	61.20		6.50	6.50	6.55	6.52	61.12
28	2	6.65	6.65	6.70	6.67	61.27		6.65	6.40	6.50	6.52	61.12		6.35	6.35	6.40	6.37	60.97
29	2	6.50	6.50	6.45	6.48	61.08		6.10	5.95	6.20	6.08	60.68		6.50	6.50	6.50	6.50	61.10
30	2	6.50	6.55	6.50	6.52	61.12		5.65	5.65	5.85	5.72	60.32		6.35	6.35	6.40	6.37	60.97
31	2	6.40	6.45	6.20	6.35	60.95								6.30	6.25	6.45	6.33	60.93

1913	August					September						October					
	Footnote	Gauge Height 7 a. m.	12 m.	6 p. m.	Mean	Sea-level Datum	Footnote	Gauge Height 7 a. m.	12 m.	6 p. m.	Mean	Sea-level Datum	Footnote	Gauge Height 7 a. m.	12 m.	6 p. m.	Mean	Sea-level Datum
1		6.30	6.25	6.30	6.28	1060.88		6.10	6.10	6.00	6.07	1060.67		5.40	5.40	5.40	5.40	1060.00
2		6.30	6.40	6.45	6.38	60.98		6.00	6.00	6.10	6.03	60.63		5.40	5.40	5.40	5.40	60.00
3		6.40	6.40	6.40	6.40	61.00		6.30	6.50	6.50	6.43	61.03		5.40	5.40	5.50	5.43	60.03
4		6.40	6.40	6.40	6.40	61.00		5.90	6.00	6.05	5.98	60.58		5.60	5.70	5.90	5.73	60.33
5		6.50	6.50	6.45	6.48	61.08		6.00	6.00	6.00	6.00	60.60		6.20	6.15	6.00	6.12	60.72
6		6.35	6.35	6.40	6.37	60.97		5.95	6.00	6.00	5.98	60.58		5.75	5.50	5.60	5.62	60.22
7		6.35	6.10	6.10	6.18	60.78		6.00	5.95	6.00	5.98	60.58		5.25	5.00	5.25	5.17	59.77
8		6.20	6.00	6.10	6.10	60.70		6.00	6.00	5.95	5.98	60.58		5.60	5.60	5.60	5.60	60.20
9		6.30	6.30	6.30	6.30	60.90		5.75	5.50	5.50	5.58	60.18		5.70	5.70	5.80	5.73	60.33
10		6.70	6.60	6.35	6.55	61.15		5.80	6.00	6.00	5.93	60.53		5.20	5.35	5.30	5.28	59.88
11		6.30	6.30	6.35	6.32	60.92		5.55	5.55	5.85	5.65	60.25		5.20	4.90	5.00	5.03	59.63
12		6.10	6.35	6.35	6.27	60.87		5.80	5.85	5.90	5.85	60.45		5.35	5.45	5.50	5.43	60.03
13		6.25	6.25	6.30	6.27	60.87		5.95	5.90	5.95	5.93	60.53		5.60	5.60	5.50	5.57	60.17
14		6.20	6.35	6.30	6.28	60.88		5.75	5.50	5.50	5.58	60.18		5.45	5.40	5.35	5.40	60.00
15		7.00	6.10	6.35	6.48	61.08		5.00	5.60	5.75	5.45	60.05		5.45	5.50	5.50	5.48	60.08
16		6.25	6.30	6.30	6.28	60.88		5.80	5.75	5.75	5.77	60.37		5.60	5.80	5.60	5.67	60.27
17		6.40	6.40	6.40	6.40	61.00		5.70	5.70	5.70	5.70	60.30		5.60	5.60	5.50	5.57	60.17
18		6.35	6.35	6.40	6.37	60.97		5.50	5.50	5.45	5.48	60.08		5.50	5.60	5.55	5.55	60.15
19		6.35	6.30	6.30	6.32	60.92		5.40	5.15	5.15	5.23	59.83		5.75	5.80	5.70	5.75	60.35
20		6.20	6.25	6.35	6.27	60.87		5.75	5.80	5.80	5.78	60.38		5.70	5.75	5.70	5.72	60.32
21		6.15	6.00	5.95	6.03	60.63		5.90	5.75	5.75	5.80	60.40		5.60	5.50	5.50	5.53	60.13
22		6.30	6.25	6.20	6.25	60.85		5.60	5.60	5.60	5.60	60.20		5.40	5.50	5.55	5.48	60.08
23		6.20	6.40	6.30	6.30	60.90		5.60	5.60	5.60	5.60	60.20		5.60	5.60	5.55	5.58	60.18
24		6.20	6.20	6.20	6.20	60.80		5.00	5.50	5.60	5.37	59.97		5.55	5.55	5.55	5.55	60.15
25		5.95	6.00	6.10	6.02	60.62		5.50	5.50	5.40	5.47	60.07		5.60	5.65	5.60	5.62	60.22
26		6.00	6.20	6.20	6.13	60.73		5.40	5.45	5.45	5.43	60.03		5.60	5.60	5.60	5.60	60.20
27		6.10	6.10	6.10	6.10	60.70		5.30	5.25	5.30	5.28	59.88		5.65	5.65	5.50	5.60	60.20
28		5.80	5.90	5.95	5.88	60.48		5.10	5.15	5.30	5.18	59.78		5.50	5.50	5.55	5.52	60.12
29		6.10	6.10	6.25	6.15	60.75		5.55	5.60	5.60	5.58	60.18		5.60	5.60	5.60	5.60	60.20
30		5.95	6.00	6.10	6.02	60.62		5.40	5.40	5.50	5.43	60.03		5.60	5.50	5.50	5.53	60.13
31		6.10	6.20	6.20	6.17	60.77								5.15	5.15	5.20	5.17	59.77

1. Morning reading at 9 a. m. 2. Morning reading at 7 a. m. 3. Morning reading at 8.30 a. m. 4. Noon reading at 1 p. m. 5. Morning reading at 8.30 a. m. Noon reading at 12.30 p. m. 6. Morning reading at 8.30 a. m. Noon reading at 1.30 p. m. 7. Morning reading at 8 a. m. 8. Gauge read 7.20 at 8 p. m. June 5. W. Gale. 9. Gauge read 5.40 at 3 p. m. July 8. W. Gale.

TABLE 16

WATER LEVELS—LAKE OF THE WOODS—OAK ISLAND, MINN.

RECORDS OF INTERNATIONAL BOUNDARY COMMISSION

1912	June (1)					July (2)				
	Gauge Height				Elevation Sea-level Datum	Gauge Height				Elevation Sea-level Datum
	6 a. m.	12 m.	6 p. m.	Mean		6 a. m.	12 m.	6 p. m.	Mean	
1						4.27	4.20	4.20	4.22	1058.82
2						4.27	4.27	4.25	4.26	58.86
3						4.27	4.27	4.20	4.25	58.85
4						4.20	4.20	4.20	4.20	58.80
5						4.25	4.25	4.30	4.27	58.87
6						4.25	4.27	4.25	4.26	58.86
7						4.30	4.25	4.30	4.28	58.88
8	4.10			4.10	1058.70	4.30	4.32	4.27	4.30	58.90
9	4.20	4.20	4.15	4.18	58.78	4.35	4.30	4.25	4.30	58.90
10	4.20	4.20	4.10	4.17	58.77	4.25	4.35	4.35	4.32	58.92
11	4.00	4.00	4.15	4.04	58.64	4.40	4.45	4.35	4.40	59.00
12	4.15	4.15	4.15	4.15	58.75	4.40	4.40	4.30	4.37	58.97
13	4.20	4.20	4.20	4.20	58.80	4.37	4.45	4.45	4.42	59.02
14	4.25	4.25	4.20	4.23	58.83	4.50	4.50	4.10	4.37	58.97
15	4.12	4.00	4.00	4.04	58.64	4.40	4.42	4.47	4.43	59.03
16	4.00	3.90	3.90	3.93	58.53	4.50	4.35	4.42	4.42	59.02
17	3.90	4.00	4.05	3.98	58.58	4.37	4.37	4.30	4.35	58.95
18	4.05	4.15	4.15	4.12	58.72	4.40	4.45	4.45	4.43	59.03
19	4.00	4.05	4.10	4.05	58.65	4.47	4.45	4.45	4.46	59.06
20	4.10	4.15	4.15	4.13	58.73	4.45	4.40	4.40	4.42	59.02
21	4.15	4.15	4.20	4.17	58.77	4.47	4.47	4.47	4.47	59.07
22	4.20	4.20	4.20	4.20	58.80	4.50	4.50	4.50	4.50	59.10
23	4.20	4.20	4.15	4.18	58.78	4.50	4.47	4.52	4.50	59.10
24	4.20	4.15	4.17	4.17	58.77	4.50	4.47	4.40	4.46	59.06
25	4.10	4.20	4.20	4.17	58.77	4.40	4.47	4.47	4.45	59.05
26	4.20	4.20	4.20	4.20	58.80	4.57	4.55	4.55	4.56	59.16
27	4.22	4.22	4.22	4.22	58.82	4.50	4.50	4.57	4.52	59.12
28	4.22	4.22	4.22	4.22	58.82	4.50	4.55	4.55	4.53	59.13
29	4.22	4.22	4.22	4.22	58.82	4.60	4.55	4.60	4.58	59.18
30	4.20	4.22	4.25	4.22	58.82	4.57	4.57	4.62	4.59	59.19
31						4.57	4.57	4.60	4.58	59.18

1912	August (3)					September (4)				
1	4.60	4.60	4.57	4.59	1059.19	5.02	5.00	5.00	5.01	1059.61
2	4.60	4.60	4.60	4.60	59.20	4.97	5.00	5.00	4.99	59.59
3	4.62	4.62	4.62	4.62	59.22	5.12	5.10	5.10	5.11	59.71
4	4.62	4.62	4.62	4.62	59.22	5.02	5.00	5.10	5.04	59.64
5	4.72	4.75	4.87	4.78	59.38	5.07	5.10	5.10	5.09	59.69
6	4.87	4.87	4.85	4.86	59.46	5.12	5.00	5.00	5.04	59.64
7	4.85	4.80	4.80	4.82	59.42	5.05	5.05	5.10	5.07	59.67
8	4.85	4.85	4.85	4.85	59.45	5.00	5.05	5.15	5.07	59.67
9	4.80	4.80	4.80	4.80	59.40	5.20	5.17	5.17	5.18	59.78
10	4.85	4.85	4.85	4.85	59.45	5.05	5.12	5.17	5.11	59.71
11	4.85	4.85	4.85	4.85	59.45	5.20	5.17	5.17	5.18	59.78
12	4.90	4.90	4.87	4.89	59.49	5.17	5.17	5.20	5.18	59.78
13	4.85	4.82	4.85	4.84	59.44	5.32	5.22	5.30	5.28	59.88
14	4.85	4.87	4.87	4.86	59.46	5.35	5.30	5.25	5.30	59.90
15	4.89	4.89	4.89	4.89	59.49	5.25	5.30	5.35	5.30	59.90
16	4.90	4.90	4.90	4.90	59.50	5.35	5.30	5.30	5.32	59.92
17	4.89	4.89	4.89	4.89	59.49	5.32	5.32	5.35	5.33	59.93
18	4.89	4.89	4.89	4.89	59.49	5.35	5.35	5.35	5.35	59.95
19	4.89	4.90	4.90	4.90	59.50	5.40	5.42	5.35	5.39	59.99
20	4.90	4.89	4.89	4.89	59.49	5.30	5.30	5.50	5.37	59.97
21	4.89	4.92	4.70	4.84	59.44	5.47	5.47	5.30	5.41	60.01
22	4.80	4.70	4.75	4.75	59.35	5.35	5.40	5.40	5.38	59.98
23	4.95	4.95	4.98	4.96	59.56	5.40	5.40	5.37	5.39	59.99
24	4.90	4.90	4.95	4.92	59.52	5.30	5.25	5.30	5.28	59.88
25	4.92	4.90	4.70	4.84	59.44	5.30	5.30	5.30	5.30	59.90
26	4.80	4.89	4.95	4.88	59.48	5.60	5.60	5.60	5.60	60.20
27	4.90	4.90	4.97	4.92	59.52	5.62	5.62	5.62	5.62	60.22
28	4.97	4.97	4.97	4.97	59.57	5.70	5.72	5.72	5.71	60.31
29	5.00	5.00	5.02	5.01	59.61	5.75	5.75	5.82	5.77	60.37
30	5.10	5.00	4.95	5.02	59.62	5.75	5.80	5.82	5.79	60.39
31	5.02	5.02	5.02	5.02	59.62					

(1) Morning readings on 9th and 11th at 5.50 a. m.; on the 17th at 6.10 a. m. Noon readings on the 12th at 12.25 p. m.; on the 16th at 12.10 p. m., and on the 17th, 21st and 25th at 12.30 p. m., and on the 24th at 12.15 p. m. Evening readings on the 9th at 7.00 p. m.; on the 14th and 15th at 6.10 p. m.; on the 17th at 5.50 p. m., and on the 20th and 24th at 6.30 p. m. (2) Morning readings on the 5th, 8th, 17th, and 21st at 6.30 a. m.; on the 6th, 9th, 10th at 6.15 a. m.; on the 19th at 6.10, a.m., and on the 22nd at 6.20 a. m. Noon readings on the 2nd, 7th, and 17th at 12.15 p. m.; on the 18th at 12.10 p. m.; on the 19th at 12.20 p. m.; and on the 25th at 12.30 p. m. Evening readings on the 1st, 8th, and 24th at 6.10 p. m.; on the 6th at 6.20 p. m., and on the 15th at 6.15 p. m. (3) Morning reading on 18th at 6.30 a. m. (4) Morning readings on the 13th and 15th at 6.15 a. m.; from the 16th to 25th, inclusive, at 6.30 a. m.; and from the 26th to 30th, inclusive, at 7.00 a. m. Evening reading on the 17th at 6.30 p. m.; on the 24th and 25th at 5.30 p. m.

TABLE 16—Continued

WATER LEVELS—LAKE OF THE WOODS—OAK ISLAND, MINN.

RECORDS OF INTERNATIONAL BOUNDARY COMMISSION

1912	October (1)									
	Gauge Height				Elevation Sea-level Datum	Gauge Height				Elevation Sea-level Datum
	7 a. m.	12 m.	6 p. m.	Mean		7 a. m.	12 m.	7 p. m.	Mean	
1	5.90	5.85	5.85	5.87	1060.47					
2	5.90	5.90	5.90	5.90	60.50					
3	5.80	5.85	5.90	5.85	60.45					
4	5.95	5.95	5.90	5.93	60.53					
5	5.90	5.90	5.90	5.90	60.50					
6	5.90	5.90	5.90	5.90	60.50					
7	6.08	6.07	5.99	6.05	60.65					
8	6.05	6.00	6.02	6.02	60.62					
9	5.98	5.99	6.03	6.00	60.60					
10	6.05	6.04	6.05	6.05	60.65					
11	6.06	6.07	6.09	6.07	60.67					
12	6.09	6.10	6.13	6.11	60.71					
13	6.12	6.12	6.07	6.10	60.70					
14	6.02	6.00	6.06	6.03	60.63					
15	6.13	6.12	6.14	6.13	60.73					
16	6.16	6.13	6.14	6.14	60.74					
17	6.13	6.12	6.15	6.13	60.73					
18	6.19	6.18	5.78	6.05	60.65					
19	6.02	6.14	6.19	6.12	60.72					
20	6.28	6.19	6.19	6.22	60.82					
21	6.05	6.00	6.00	6.02	60.62					
22	6.05	6.10	6.20	6.12	60.72					
23	6.25	6.25	6.20	6.23	60.83					
24	6.15	6.15	6.05	6.12	60.72					
25	6.08	6.05	6.05	6.06	60.66					
26	6.05	6.05	6.10	6.07	60.67					
27	6.15	6.10	6.10	6.12	60.72					
28	6.05	6.00	6.00	6.02	60.62					
29	5.70	5.70	5.90	5.77	60.37					
30	6.05	6.10	6.10	6.08	60.68					
31	5.90	5.90	5.96	5.92	60.52					

1913	May					June				
	6 a. m.		7 p. m.							
1						6.30	6.40	6.42	6.37	1060.97
2						6.42	6.40	6.35	6.39	60.99
3						6.35	6.32	6.47	6.38	60.98
4	6.47	6.47	6.47	6.47	1061.07	6.40	6.40	6.42	6.41	61.01
5	6.35	6.35	6.35	6.35	60.95	6.45	6.42	6.47	6.45	61.05
6	6.47	6.47	6.47	6.47	61.07	6.20	6.35	6.35	6.30	60.90
7	6.47	6.47	6.32	6.42	61.02	6.45	6.45	6.45	6.45	61.05
8	6.25	6.45	6.30	6.33	60.93	6.47	6.45	6.45	6.46	61.06
9	6.35	6.45	6.47	6.42	61.02	6.50	6.45	6.47	6.47	61.07
10	6.47	6.47	6.47	6.47	61.07	6.50	6.42	6.47	6.46	61.06
11	6.50	6.47	6.47	6.48	61.08	6.47	6.45	6.45	6.46	61.06
12	6.30	6.40	6.30	6.33	60.93	6.45	6.40	6.40	6.42	61.02
13	6.30	6.35	6.40	6.35	60.95	6.47	6.42	6.45	6.45	61.05
14	6.55	6.50	6.50	6.52	61.12	6.42	6.45	6.40	6.42	61.02
15	6.47	6.45	6.50	6.47	61.07	6.40	6.35	6.30	6.35	60.95
16	6.55	6.50	6.40	6.48	61.08	6.27	6.25	6.27	6.26	60.86
17	6.30	6.25	6.25	6.27	60.87	6.32	6.35	6.32	6.33	60.93
18	6.20	6.30	6.30	6.27	60.87	6.35	6.30	6.37	6.34	60.94
19	6.47	6.47	6.47	6.47	61.07	6.32	6.30	6.35	6.32	60.92
20	6.50	6.55	6.40	6.48	61.08	6.25	6.25	6.32	6.27	60.87
21	6.35	6.45	6.50	6.43	61.03	6.27	6.25	6.27	6.26	60.86
22	6.45	6.45	6.47	6.46	61.06	6.27	6.25	6.27	6.26	60.86
23	6.47	6.47	6.40	6.45	61.05	6.27	6.10	6.20	6.19	60.79
24	6.45	6.47	6.45	6.46	61.06	6.27	6.30	6.27	6.28	60.88
25	6.50	6.47	6.47	6.48	61.08	6.27	6.10	6.00	6.12	60.72
26	6.47	6.45	6.47	6.46	61.06	6.05	6.15	6.05	6.08	60.68
27	6.45	6.47	6.45	6.46	61.06	6.20	6.25	6.27	6.24	60.84
28	6.42	6.30	6.55	6.42	61.02	6.17	6.27	6.20	6.21	60.81
29	6.45	6.57	6.47	6.50	61.10	6.27	6.20	6.37	6.28	60.88
30	6.40	6.37	6.47	6.41	61.01	6.25	6.17	6.07	6.16	60.76
31	6.42	6.45	6.45	6.44	61.04					

(1) Morning readings on the 1st, 2nd, 3rd at 6.30 a. m.; on the 19th, 21st, and 29th at 7.30 a. m. Evening readings on the 5th at 5.30 p. m.; on the 17th, 18th, 20th, and 22nd to 31st, inclusive, at 5.00 p. m.

TABLE 16—Continued.

WATER LEVELS—LAKE OF THE WOODS—OAK ISLAND, MINN.

RECORDS OF INTERNATIONAL BOUNDARY COMMISSION

1913	JULY					AUGUST				
	Gauge Height				Elevation Sea-level Datum	Gauge Height				Elevation Sea-level Datum
	6 a. m.	12 m.	7 p. m.	Mean		7 a. m.	12 m.	6 p. m.	Mean	
1	6.07	6.10	6.20	6.12	1060.72	6.35	6.30	6.25	6.30	1060.90
2	6.20	6.17	6.20	6.19	60.79	6.35	6.27	6.27	6.30	60.90
3	6.10	6.07	5.97	6.05	60.65	6.25	6.25	6.32	6.27	60.87
4	6.12	6.10	6.07	6.10	60.70	6.30	6.30	6.30	6.30	60.90
5	6.00	5.97	6.15	6.04	60.64	6.22	6.20	6.25	6.22	60.82
6	6.15	6.15	6.17	6.16	60.76	6.25	6.22	6.22	6.23	60.83
7	6.15	6.17	6.17	6.16	60.76	6.32	6.42	6.35	6.36	60.96
8	6.02	6.00	5.75	5.92	60.52	6.22	6.20	6.17	6.20	60.80
9	6.02	6.07	6.12	6.07	60.67	6.20	6.10	6.15	6.15	60.75
10	6.17	6.17	6.15	6.16	60.76	6.30	6.22	6.25	6.26	60.86
11	6.25	6.22	6.20	6.22	60.82	6.35	6.20	6.22	6.26	60.86
12	6.27	6.27	6.35	6.30	60.90	6.22	6.20	6.20	6.21	60.81
13	6.22	6.27	6.27	6.25	60.85	6.22	6.22	6.20	6.21	60.81
14	6.35	6.35	6.32	6.34	60.94	6.20	6.17	6.22	6.20	60.80
15	6.37	6.27	6.35	6.33	60.93	6.07	6.10	6.20	6.12	60.72
16	6.30	6.27	6.35	6.31	60.91	6.22	6.20	6.17	6.20	60.80
17	6.35	6.35	6.30	6.33	60.93	6.17	6.17	6.20	6.18	60.78
18	6.27	6.30	6.25	6.27	60.87	6.15	6.17	6.22	6.18	60.78
19	6.27	6.22	6.25	6.25	60.85	6.25	6.17	6.15	6.19	60.79
20	6.37	6.40	6.42	6.40	61.00	6.15	6.15	6.17	6.16	60.76
21	6.37	6.37	6.40	6.38	60.98	6.07	6.10	6.10	6.09	60.69
22	6.37	6.35	6.35	6.36	60.96	6.17	6.17	6.20	6.18	60.78
23	6.32	6.32	6.37	6.34	60.94	6.05	6.05	6.07	6.06	60.66
24	6.35	6.45	6.47	6.42	61.02	6.20	6.17	6.22	6.20	60.80
25	6.47	6.40	6.37	6.41	61.01	6.00	5.97	5.97	5.98	60.58
26	6.45	6.40	6.45	6.43	61.03	5.95	6.00	6.07	6.01	60.61
27	6.35	6.37	6.37	6.36	60.96	6.15	6.07	6.15	6.12	60.72
28	6.47	6.40	6.45	6.44	61.04	5.97	5.95	5.93	5.96	60.56
29	6.45	6.42	6.40	6.42	61.02	5.97	6.00	6.12	6.03	60.63
30	6.40	6.40	6.27	6.36	60.96	6.15	6.12	6.00	6.09	60.69
31	6.27	6.25	6.35	6.29	60.89	6.00	6.10	6.17	6.09	60.69

1913	SEPTEMBER					OCTOBER				
	7 a.m.		6 p. m.							
1	6.07	6.00	5.95	6.01	1060.61	5.35	5.35	5.25	5.32	1059.92
2	5.95	5.92	5.90	5.92	60.52	5.40	5.42	5.42	5.41	60.01
3	5.97	6.00	6.00	5.99	60.59	5.37	5.37	5.35	5.36	59.96
4	5.95	5.92	5.87	5.91	60.51	5.35	5.37	5.37	5.36	59.96
5	5.92	5.87	5.87	5.89	60.49	5.25	5.27	5.35	5.29	59.89
6	5.95	5.87	5.85	5.89	60.49	5.42	5.45	5.50	5.46	60.06
7	5.80	5.72	5.75	5.76	60.36	5.55	5.40	5.45	5.47	60.07
8	5.80	5.87	5.82	5.83	60.43	5.47	5.45	5.42	5.45	60.05
9	6.17	6.02	5.97	6.05	60.65	5.42	5.45	5.50	5.46	60.06
10	5.70	5.82	5.87	5.80	60.40	5.60	5.52	5.47	5.53	60.13
11	5.80	5.70	5.67	5.72	60.32	5.45	5.45	5.40	5.43	60.03
12	5.72	5.75	5.67	5.71	60.31	5.37	5.42	5.50	5.43	60.03
13	5.80	5.77	5.80	5.79	60.39	5.60	5.55	5.52	5.56	60.16
14	5.87	5.87	5.80	5.85	60.45	5.60	5.55	5.42	5.52	60.12
15	5.65	5.70	5.70	5.68	60.28	5.42	5.50	5.50	5.47	60.07
16	5.65	5.67	5.65	5.66	60.26	5.52	5.57	5.57	5.55	60.15
17	5.62	5.67	5.65	5.65	60.25	5.62	5.57	5.55	5.58	60.18
18	5.75	5.70	5.70	5.72	60.32	5.47	5.47	5.52	5.49	60.09
19	5.65	5.65	5.40	5.57	60.17	5.25	5.30	5.42	5.32	59.92
20	5.15	5.20	5.25	5.20	59.80	5.40	5.40	5.42	5.41	60.01
21	5.22	5.25	5.47	5.31	59.91	5.50	5.52	5.52	5.51	60.11
22	5.60	5.50	5.50	5.53	60.13	5.55	5.52	5.60	5.56	60.16
23	5.50	5.50	5.47	5.49	60.09	5.60	5.62	5.62	5.61	60.21
24	5.47	5.45	5.42	5.45	60.05	5.42	5.45	5.55	5.47	60.07
25	5.40	5.40	5.40	5.40	60.00	5.50	5.50	5.47	5.49	60.09
26	5.40	5.37	5.40	5.39	59.99	5.37	5.47	5.50	5.45	60.05
27	5.40	5.40	5.40	5.40	60.00	5.60	5.62	5.60	5.61	60.21
28	5.42	5.37	5.40	5.40	60.00					
29	5.40	5.42	5.40	5.41	60.01					
30	5.42	5.40	5.40	5.41	60.01					
31										

TABLE 17

WATER LEVELS—LAKE OF THE WOODS—OAK POINT, MINN.

RECORDS OF INTERNATIONAL BOUNDARY COMMISSION

1913	July					August				
	Gauge Height				Elevation Sea-level Datum	Gauge Height				Elevation Sea-level Datum
	7 a. m.	12 m.	6 p. m.	Mean		7 a. m.	12 m.	6 p. m.	Mean	
1						4.10	4.05	4.10	4.08	1060.98
2						4.00	4.00	4.05	4.02	60.92
3						4.05	4.10	4.00	4.05	60.95
4						4.00	4.00	4.00	4.00	60.90
5						4.15	4.15	4.10	4.13	61.03
6						4.00	3.95	3.95	3.97	60.87
7						3.70	3.70	3.75	3.72	60.62
8						3.90	3.90	3.95	3.92	60.82
9						4.00	4.15	4.15	4.10	61.00
10						3.80	3.85	3.90	3.85	60.75
11						3.80	3.80	3.85	3.82	60.72
12						3.80	3.85	3.85	3.83	60.73
13						3.80	3.85	3.85	3.83	60.73
14						3.85	3.90	3.85	3.87	60.77
15						4.05	3.85	3.90	3.93	60.83
16						3.90	3.95	3.90	3.92	60.82
17						4.00	4.00	4.00	4.00	60.90
18						3.85	3.75	3.80	3.80	60.70
19						3.70	3.80	3.70	3.73	60.63
20						3.75	3.80	3.75	3.77	60.67
21						4.05	4.05	4.20	4.10	61.00
22						3.90	3.90	3.85	3.88	60.78
23						3.90	3.90	4.05	3.95	60.85
24						3.70	3.70	3.75	3.72	60.62
25						3.80	4.00	3.95	3.92	60.82
26						4.00	3.90	3.80	3.90	60.80
27						3.70	3.70	3.70	3.70	60.60
28	4.00	4.05	4.00	4.02	1060.92	3.95	4.25	4.15	4.12	61.02
29	4.10	4.10	4.10	4.10	61.00	3.95	3.85	3.75	3.85	60.75
30	4.10	4.10	4.10	4.10	61.00	3.70	3.60	3.60	3.63	60.53
31	4.15	4.20	4.15	4.17	61.07	3.65	3.65	3.70	3.67	60.57

1913	September					October				
1	3.55	3.60	3.75	3.63	1060.53	3.15	3.10	3.15	3.13	1060.03
2	3.75	3.65	3.70	3.70	60.60	3.10	3.00	3.95	3.35	60.25
3	3.60	3.65	3.65	3.63	60.53	3.00	3.00	3.05	3.02	59.92
4	3.50	3.50	3.50	3.50	60.40	3.05	3.10	3.00	3.05	59.95
5	3.50	3.50	3.50	3.50	60.40	3.60	3.60	3.30	3.50	60.40
6	3.55	3.55	3.55	3.55	60.45	3.10	3.05	3.10	3.08	59.98
7	3.60	3.65	3.70	3.65	60.55	2.95	2.95	3.00	2.97	59.87
8	3.50	3.50	3.50	3.50	60.40	3.10	3.10	3.15	3.12	60.02
9	3.00	3.00	2.95	2.98	59.88	3.15	3.15	3.15	3.15	60.05
10	3.55	3.55	3.50	3.53	60.43	3.20	3.20	3.20	3.20	60.10
11	3.50	3.70	3.75	3.65	60.55	3.15	3.30	3.40	3.28	60.18
12	3.55	3.50	3.60	3.55	60.45	3.40	3.30	3.25	3.32	60.22
13	3.40	3.40	3.40	3.40	60.30	3.10	3.15	3.15	3.13	60.03
14	3.20	3.20	3.20	3.20	60.10	3.20	3.20	3.40	3.27	60.17
15	3.40	3.40	3.40	3.40	60.30	3.45	3.30	3.20	3.32	60.22
16	3.40	3.40	3.45	3.42	60.32	3.20	3.25	3.25	3.23	60.13
17	3.30	3.30	3.30	3.30	60.20	3.00	3.10	3.15	3.08	59.98
18	3.00	3.00	3.00	3.00	59.90	3.20	3.20	3.20	3.20	60.10
19	3.20	3.20	4.05	3.48	60.38	3.90	3.60	3.50	3.67	60.57
20	4.00	3.80	3.90	3.90	60.80	3.50	3.50	.....	3.50	60.40
21	3.70	3.55	3.40	3.55	60.45	.....	.....	.....	.....	.....
22	3.20	3.10	3.00	3.10	60.00	.....	.....	.....	.....	.....
23	3.00	3.05	3.10	3.05	59.95	.....	.....	.....	.....	.....
24	3.15	3.15	3.15	3.15	60.05	.....	.....	.....	.....	.....
25	3.10	3.15	3.15	3.13	60.03	.....	.....	.....	.....	.....
26	3.05	3.10	3.10	3.08	59.98	.....	.....	.....	.....	.....
27	3.00	2.95	2.95	2.97	59.87	.....	.....	.....	.....	.....
28	2.95	3.05	3.10	3.03	59.93	.....	.....	.....	.....	.....
29	3.10	3.10	3.10	3.10	60.00	.....	.....	.....	.....	.....
30	3.00	3.05	3.00	3.02	59.92	.....	.....	.....	.....	.....
31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

TABLE 18

WATER LEVELS—LAKE OF THE WOODS—OAK ISLAND, MINN.

RECORDS OF INTERNATIONAL JOINT COMMISSION

1914	MARCH					APRIL				
	Gauge Height				Elevation Sea-level Datum	Gauge Height				Elevation Sea-level Datum
	7 a. m.	12 m.	6 p. m.	Mean		7 a. m.	12 m.	6 p. m.	Mean	
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
31										

1914	MAY					JUNE				
1						6.45	6.45	6.45	6.45	1061.05
2						6.47	6.45	6.45	6.46	61.06
3						6.52	6.47	6.45	6.48	61.08
4						6.45	6.52	6.52	6.50	61.10
5						6.50	6.45	6.55	6.50	61.10
6						6.50	6.50	6.47	6.49	61.09
7						6.47	6.42	6.42	6.44	61.04
8						6.50	6.52	6.50	6.51	61.11
9						6.55	6.60	6.55	6.57	61.17
10						6.60	6.62	6.22	6.48	61.08
11						6.65	6.65	6.65	6.65	61.25
12						6.67	6.70	6.65	6.67	61.27
13						6.77	6.77	6.75	6.76	61.36
14						6.70	6.72	6.72	6.71	61.31
15						6.80	6.80	6.80	6.80	61.40
16						6.75	6.75	6.80	6.77	61.37
17						6.77	6.77	6.80	6.78	61.38
18						6.67	6.77	6.75	6.73	61.33
19						6.80	6.80	6.82	6.81	61.41
20						6.80	6.77	6.70	6.76	61.36
21			6.12	6.12	1060.72	6.72	6.77	6.77	6.75	61.35
22	6.20	6.17	6.15	6.17	60.77	6.77	6.72	6.65	6.71	61.31
23	6.17	6.22	6.22	6.20	60.80	6.77	6.77	6.77	6.77	61.37
24	6.25	6.22	6.25	6.24	60.84	6.67	.....	6.65	6.66	61.26
25	6.27	6.32	6.32	6.30	60.90	6.67	.....	6.65	6.66	61.26
26	6.35	6.30	6.27	6.31	60.91	6.67	.....	6.65	6.66	61.26
27	6.27	6.30	6.32	6.30	60.90	6.65	.....	6.65	6.65	61.25
28	6.40	6.37	6.40	6.39	60.99	6.65	.....	6.67	6.66	61.26
29	6.40	6.35	6.40	6.38	60.98	6.62	.....	6.60	6.61	61.21
30	6.42	6.40	6.45	6.42	61.02	6.60	.....	6.65	6.62	61.22
31	6.35	6.35	6.27	6.32	60.92	.....	.....	.....	.....	.....

TABLE 18—Continued

WATER LEVELS—LAKE OF THE WOODS—OAK ISLAND, MINN.

RECORDS OF INTERNATIONAL JOINT COMMISSION

1914	July				August				September			
	Gauge Height			Elevation Sea-level Datum	Gauge Height			Elevation Sea-level Datum	Gauge Height			Elevation Sea-level Datum
	7 a. m.	6 p. m.	Mean		7 a. m.	6 p. m.	Mean		7 a. m.	6 p. m.	Mean	
1	6.57	6.60	6.59	1061.19	6.40	6.30	6.35	1060.95	5.67	5.72	5.69	1060.29
2	6.62	6.60	6.61	61.21	6.42	6.40	6.41	61.01	5.65	5.62	5.64	60.24
3	6.60	6.60	6.60	61.20	6.37	6.37	6.37	60.97	5.47	5.65	5.56	60.16
4	6.60	6.57	6.58	61.18	6.40	6.40	6.40	61.00	5.65	5.65	5.65	60.25
5	6.60	6.60	6.60	61.20	6.20	6.17	6.19	60.79	5.65	5.67	5.66	60.26
6	6.60	6.47	6.54	61.14	6.05	6.17	6.11	60.71	5.67	5.67	5.67	60.27
7	6.47	6.55	6.51	61.11	6.25	6.22	6.23	60.83	5.67	5.65	5.66	60.26
8	6.57	6.50	6.53	61.13	6.17	6.20	6.19	60.79	5.70	5.65	5.67	60.27
9	6.50	6.47	6.49	61.09	6.20	6.20	6.20	60.80	5.82	5.80	5.81	60.41
10	6.55	6.47	6.51	61.11	6.05	6.10	6.07	60.67	5.70	5.70	5.70	60.30
11	6.52	6.55	6.53	61.13	6.10	6.12	6.11	60.71	5.77	5.70	5.74	60.34
12	6.62	6.47	6.55	61.15	6.15	6.15	6.15	60.75	5.85	5.85	5.85	60.45
13	6.62	6.62	6.62	61.22	6.02	5.90	5.96	60.56	6.00	5.87	5.93	60.53
14	6.62	6.60	6.61	61.21	5.97	6.00	5.99	60.59	5.65	5.75	5.70	60.30
15	6.55	6.60	6.57	61.17	6.02	6.02	6.02	60.62	5.82	5.82	5.82	60.42
16	6.65	6.60	6.63	61.23	6.00	6.00	6.00	60.60	5.60	5.82	5.71	60.31
17	6.60	6.65	6.62	61.22	5.95	5.95	5.95	60.55	5.82	5.82	5.82	60.42
18	6.65	6.60	6.63	61.23	5.97	5.95	5.96	60.56	6.00	5.85	5.93	60.53
19	6.57	6.55	6.56	61.16	5.97	5.95	5.96	60.56	6.00	5.87	5.93	60.53
20	6.60	6.60	6.60	61.20	5.97	5.87	5.92	60.52	5.92	5.87	5.90	60.50
21	6.62	6.65	6.63	61.23	5.87	5.87	5.87	60.47	5.90	5.62	5.76	60.36
22	6.60	6.60	6.60	61.20	5.85	5.95	5.90	60.50	5.65	5.82	5.73	60.33
23	6.57	6.57	6.57	61.17	5.77	5.80	5.78	60.38	5.87	5.85	5.86	60.46
24	6.60	6.57	6.58	61.18	5.82	5.80	5.81	60.41	5.82	5.82	5.82	60.42
25	6.57	6.55	6.56	61.16	5.80	5.85	5.83	60.43	5.87	5.87	5.87	60.47
26	6.60	6.57	6.58	61.18	5.80	5.80	5.80	60.40	5.87	5.85	5.86	60.46
27	6.57	6.57	6.57	61.17	5.90	5.80	5.85	60.45	6.05	5.90	5.98	60.58
28	6.57	6.50	6.53	61.13	5.80	5.92	5.86	60.46	5.82	5.82	5.82	60.42
29	6.50	6.50	6.50	61.10	5.87	5.85	5.86	60.46	5.82	5.85	5.83	60.43
30	6.45	6.50	6.48	61.08	5.87	5.90	5.88	60.48	5.90	5.85	5.88	60.48
31	6.30	6.47	6.38	60.98	5.80	5.67	5.74	60.34	.....	.....	.....	.....

1914	October				November				December			
1	5.90	5.85	5.87	1060.47	5.95	6.15	6.05	1060.65	6.20	6.12	6.16	1060.76
2	5.87	5.82	5.85	60.45	6.15	6.15	6.15	60.75	6.12	6.15	6.14	60.74
3	5.87	5.87	5.87	60.47	6.10	6.10	6.10	60.70	6.15	6.17	6.16	60.76
4	5.87	5.85	5.86	60.46	5.95	5.97	5.96	60.56	6.17	6.17	6.17	60.77
5	5.85	5.82	5.83	60.43	6.00	[2]6.02	6.01	60.61	6.17	6.15	6.16	60.76
6	5.82	5.82	5.82	60.42	6.00	6.10	6.05	60.65	6.15	6.15	6.15	60.75
7	5.82	5.82	5.82	60.42	5.65	6.00	5.82	60.42	6.15	6.12	6.13	60.73
8	5.85	5.82	5.84	60.44	6.07	6.10	6.09	60.69	6.12	6.12	6.12	60.72
9	5.80	5.82	5.81	60.41	6.17	6.17	6.17	60.77	6.15	6.15	6.15	60.75
10	5.75	5.87	5.81	60.41	6.10	6.10	6.10	60.70	6.15	6.15	6.15	60.75
11	5.78	5.82	5.80	60.40	6.00	6.00	6.00	60.60	6.15	6.15	6.15	60.75
12	6.00	5.97	5.98	60.58	6.10	6.10	6.10	60.70	6.15	6.15	6.15	60.75
13	5.97	5.95	5.96	60.56	5.95	5.95	5.95	60.55	6.15	6.15	6.15	60.75
14	6.05	6.05	6.05	60.65	5.95	5.95	5.95	60.55	6.15	6.15	6.15	60.75
15	5.87	5.97	5.92	60.52	5.97	5.97	5.97	60.57	6.15	6.15	6.15	60.75
16	6.10	6.00	6.05	60.65	5.95	5.95	5.95	60.55	6.15	6.15	6.15	60.75
17	6.00	6.00	6.00	60.60	5.95	5.95	5.95	60.55	.....	.....	.....	.....
18	6.10	5.97	6.04	60.64	5.95	5.95	5.95	60.55	.....	.....	.....	.....
19	6.05	6.05	6.05	60.65	6.10	6.07	6.08	60.68	.....	.....	.....	.....
20	6.05	6.00	6.02	60.62	6.00	5.95	5.98	60.58	.....	.....	.....	.....
21	6.00	6.02	6.01	60.61	5.95	5.95	5.95	60.55	.....	.....	.....	.....
22	6.10	6.05	6.08	60.68	5.97	5.97	5.97	60.57	.....	.....	.....	.....
23	5.80	6.02	5.91	60.51	5.97	5.97	5.97	60.57	.....	.....	.....	.....
24	6.10	6.07	6.08	60.68	6.15	6.15	6.15	60.75	.....	.....	.....	.....
25	6.00	5.82	5.91	60.51	6.15	6.17	6.16	60.76	.....	.....	.....	.....
26	6.02	6.02	6.02	60.62	6.10	6.15	6.12	60.72	.....	.....	.....	.....
27	6.07	6.05	6.06	60.66	6.17	6.15	6.16	60.76	.....	.....	.....	.....
28	5.97	6.00	5.98	60.58	6.15	6.15	6.15	60.75	.....	.....	.....	.....
29	6.00	[1]6.02	6.01	60.61	6.15	6.12	6.14	60.74	.....	.....	.....	.....
30	6.15	6.15	6.15	60.75	6.15	6.12	6.13	60.73	.....	.....	.....	.....
31	6.20	6.15	6.18	60.78	.....	.....	.....	.....	.....	.....	.....	.....

[1] Readings from October 29th to November 4th at 5.45.
[2] Readings from November 5th to 11th taken at 5.30.

TABLE 19

WATER LEVELS—LAKE OF THE WOODS—OAK POINT, MINN.

RECORDS OF INTERNATIONAL JOINT COMMISSION

1914	July				August				September			
	Gauge Height			Elevation Sea-level Datum	Gauge Height			Elevation Sea-level Datum	Gauge Height			Elevation Sea-level Datum
	7 a. m.	6 p. m.	Mean		7 a. m.	6 p. m.	Mean		7 a. m.	6 p. m.	Mean	
1					3.05	3.09	3.07	1061.05	2.40	2.32	2.36	1060.34
2					3.07	3.07	3.07	61.05	2.50	2.50	2.50	60.48
3					2.85	2.99	2.92	60.90	[4] 3.20	2.50	2.85	60.83
4					2.90	2.85	2.88	60.86	2.30	2.31	2.31	60.29
5					3.00	2.90	2.95	60.93	2.21	2.45	2.33	60.31
6					3.15	2.95	3.05	61.03	2.45	2.38	2.41	60.39
7					2.70	2.60	2.65	60.63	2.33	2.35	2.34	60.32
8					2.80	2.70	2.75	60.73	2.24	2.25	2.25	60.23
9						2.80	2.80	60.78	2.00	2.05	2.02	60.00
10					3.05	2.77	2.91	60.89	2.30	2.31	2.31	60.29
11					2.74	2.69	2.71	60.69	2.36	2.38	2.37	60.35
12					2.70	2.60	2.65	60.63	2.05	2.01	2.03	60.01
13					2.85	2.90	2.88	60.86	2.00	2.05	2.02	60.00
14					2.79	2.60	2.69	60.67	2.10	2.20	2.15	60.13
15					2.52	2.55	2.54	60.52	2.15	2.13	2.14	60.12
16					2.60	2.52	2.56	60.54	2.40	2.55	2.48	60.46
17					2.50	2.59	2.54	60.52	2.43	2.43	2.43	60.41
18					2.61	2.58	2.60	60.58	2.30	2.35	2.32	60.30
19					2.55	2.57	2.56	60.54	2.40	2.45	2.43	60.41
20	[1] 3.20		3.20	1061.18	2.45	2.52	2.48	60.46	2.40	2.45	2.42	60.40
21*	3.15	3.05	3.13	61.11	2.55	2.50	2.53	60.51	2.45	[5] 3.20	2.83	60.81
22*	3.28	3.20	3.25	61.23	2.53	2.52	2.52	60.50	[6] 3.10	[7] 3.00	3.05	61.03
23*	3.20	3.20	3.19	61.17	2.75	2.60	2.68	60.66	2.45*	2.50	2.47	60.45
24*	3.20	3.23	3.20	61.18	2.45	2.39	2.42	60.40	2.78	2.55	2.67	60.65
25*	3.20	3.17	3.19	61.17	2.40	2.55	2.47	60.45	2.45	2.44	2.44	60.42
26	3.12	3.17	3.14	61.12	2.53	2.49	2.51	60.49	2.41	2.50	2.46	60.44
27	3.20	[2] 1.80	2.50	60.48	2.45	2.40	2.43	60.41	2.30	2.40	2.35	60.33
28	[3] 1.60	3.10	2.35	60.33	2.35	2.20	2.27	60.25	2.45	2.43	2.44	60.42
29	2.96	3.02	2.99	60.97	2.35	2.45	2.40	60.38	2.50	2.45	2.47	60.45
30	3.10	3.12	3.11	61.09	2.45	2.35	2.40	60.38	2.33	2.40	2.37	60.35
31	3.20	3.08	3.14	61.12	2.25	2.45	2.35	60.33				

1914	October				November			
1	2.20	2.35	2.27	1060.25	3.00	2.75	2.87	1060.85
2	2.20	2.35	2.28	60.26	2.65	2.65	2.65	60.63
3	2.35	2.36	2.35	60.33	2.70	2.85	2.78	60.76
4	2.31	2.40	2.36	60.34	2.95	3.10	3.02	61.00
5	2.46	2.45	2.45	60.43	2.80	2.75	2.78	60.76
6	2.42	2.45	2.44	60.42				
7	2.42	2.45	2.43	60.41				
8	2.37	2.40	2.39	60.37				
9	2.49	2.55	2.52	60.50		2.50	2.50	60.48
10	2.80	2.80	2.80	60.78	2.78	2.85	2.81	60.79
11	2.79	2.80	2.79	60.77	2.90	2.80	2.85	60.83
12	2.70	2.65	2.68	60.66	2.70	2.70	2.70	60.68
13	2.60	2.60	2.60	60.58	2.90	2.80	2.85	60.83
14	2.45	2.45	2.45	60.43	2.85	2.95	2.90	60.88
15	2.55	2.60	2.57	60.55	2.90	3.20	3.05	61.03
16	2.43	2.60	2.52	60.50	3.00	3.00	3.00	60.98
17	2.65	2.70	2.67	60.65	2.90	3.00	2.95	60.93
18	2.33	2.55	2.44	60.42	3.00	3.00	3.00	60.98
19	2.55	2.61	2.58	60.56				
20	2.60	2.60	2.60	60.58				
21	2.65	2.65	2.65	60.63				
22	2.60	2.55	2.58	60.56				
23	[8] 3.16	2.90	3.03	61.01				
24	2.70	2.60	2.65	60.63				
25	2.80	[9] 3.18	2.99	60.97				
26	2.90	2.90	2.90	60.88				
27	2.60	2.60	2.60	60.58				
28	2.90	2.75	2.82	60.80				
29	2.80	2.75	2.78	60.76				
30	2.68	2.62	2.65	60.63				
31	2.65	2.71	2.68	60.66				

* Gauge heights were also taken at noon from July 21 to 25; July 21, 3.20; 22, 3.27; 23, 3.18; 24, 3.18; and 25, 3.20.

[1] 8 a. m.
[2] N. E. Fresh.
[3] S. E. Fresh.
[4] No. W. windy.
[5] No. W. windy.
[6] No. windy.
[7] No. windy.
[8] No. W. windy.
[9] No. W. windy.

TABLE 20

WATER LEVELS—LAKE OF THE WOODS—KENORA, ONTARIO

RECORDS OF G. M. WYNN

1906	Head Water		Tail Water		1906	Head Water		Tail Water	
	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum		Local Datum	Sea-level Datum	Local Datum	Sea-level Datum
June 8	.....	.....	79.34	1041.97	Oct. 9	97.00	1059.63	75.70	1038.33
9	98.30	1060.93	.....	.....	10	97.30	1059.93	75.90	1038.53
23	98.46	1061.09	.....	.....	11	97.50	1060.13	76.20	1038.83
					12	97.40	1060.03	76.30	1038.93
July 9	98.65	†061.28	.....	.....	13	97.20	1059.83	76.70	1039.33
10	98.62	1061.25	79.01	1041.64	15	97.40	1060.03	76.90	1039.53
11	98.81	1061.44	.....	.....	16	97.40	1060.03	77.10	1039.73
					17	*97.40	1060.03	77.20	1039.83
Sept. 20	97.60	1060.23	.....	.....	18	97.20	1059.83	77.00	1039.63
22	.....	.....	75.70	1038.33	19	97.00	1059.63	76.90	1039.53
26	97.50	1060.13	75.40	1038.03	20	97.00	1059.63	76.90	1039.53
27	97.65	1060.28	75.30	1037.93	22	97.30	1059.93	76.70	1039.33
29	97.35	1059.98	75.60	1038.23	23	97.00	1059.63	76.70	1039.33
					24	97.00	1059.63	76.70	1039.33
Oct. 1	97.30	1059.93	75.50	1038.13	25	97.10	1059.73	76.70	1039.33
2	97.40	1060.03	75.40	1038.03	26	97.00	1059.63	76.70	1039.33
3	97.50	1060.13	75.40	1038.03	27	96.60	1059.23	76.60	1039.23
4	97.50	1060.13	75.50	1038.13	29	96.70	1059.33	76.50	1039.13
5	97.20	1059.83	75.40	1038.03	30	96.90	1059.53	76.50	1039.13
6	97.50	1060.13	75.50	1038.13	31	97.20	1059.83	76.60	1039.23
8	97.00	1059.63	75.75	1038.38					

*Level of tail water has gone up recently. Some of the stop logs have been removed from the Norman Dam. (Gauge Reader.)

TABLE 21

MISCELLANEOUS WATER LEVELS—LAKE OF THE WOODS—KENORA, ONTARIO

RECORDS OF G. M. WYNN

1906		Elevation	
		Local Datum	Sea-level Datum
June 9	High water mark on rock (No location recorded)	99.60	1062.23
23	Water mark on left shore of outlet in vicinity of C. C. Rance sign painted on rock shore	99.78	1062.41
July 4	Water level at C. P. R. Ry. Bridge over Eastern Outlet	98.42	1061.05
4	Water level at Western Outlet at old roadway on Tunnel Island shore just below old rollerway damsite	98.22	1060.85
	Bench Mark: Highest point of large boulder under large pine tree at north side old roadway Tunnel Island shore Western Outlet. Elevation	102.215	1064.875
11	Distance from base of rail on old C. P. R. bridge over Eastern Outlet to water level 27.83 ft.		
11	A High Water mark as shown on rocks below falls	83.75	1046.38
	High water mark below falls for the year 1906	81.59	1044.13
30	Gauges established above and below power house.		
Sept. 20	Stop logs in place at Norman Dam and tailwater has fallen in last 48 hours to 76—. The headwater is at 97.6. I may add that the tailwater has been at 78.4 for some time past.		

TABLE 22

WATER LEVELS—WINNIPEG RIVER—KENORA RIVER GAUGE

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

1912	August		September		October		November		December	
	W. P. S. Datum	Sea-level Datum	W. P. S. Datum	Sea-level Datum	W. P. S. Datum	Sea-level Datum	W. P. S. Datum	Sea-level Datum	W. P. S. Datum	Sea-level Datum
1	1035.07	1036.38	1033.75	1035.06	1034.08	1035.39	1036.08	1037.39	1035.70	1037.01
2	35.08	36.39	34.37	35.68	33.98	35.29	36.07	37.38	35.57	36.88
3	35.09	36.40	35.29	36.60	33.98	35.29	35.59	36.90	36.09	37.40
4	34.49	35.80	34.90	36.21	33.99	35.30	35.59	36.90	36.13	37.44
5	33.67	34.98	35.14	36.45	35.37	36.68	36.03	37.34	36.15	37.46
6	35.18	36.49	34.07	35.38	34.55	35.86	36.07	37.38	36.15	37.46
7	35.15	36.46	33.72	35.03	34.67	35.98	36.07	37.38	36.16	37.47
8	35.16	36.47	34.27	35.58	35.57	36.88	35.92	37.23	35.79	37.10
9	35.16	36.47	33.97	35.28	35.67	36.98	35.74	37.05	35.75	37.06
10	35.17	36.48	33.87	35.18	35.67	36.98	34.98	36.29	36.19	37.50
11	34.15	35.46	33.77	35.08	35.65	36.96	34.87	36.18	36.22	37.53
12	34.15	35.46	33.77	35.08	35.63	36.94	35.62	36.93	36.19	37.50
13	35.16	36.47	34.67	35.98	34.99	36.30	35.80	37.11	36.19	37.50
14	35.18	36.49	34.65	35.96	35.25	36.56	35.88	37.19	36.09	37.40
15	35.19	36.50	33.84	35.15	35.65	36.96	35.91	37.22	35.47	36.78
16	35.18	36.49	34.49	35.80	35.69	37.00	36.01	37.32	35.69	37.00
17	35.18	36.49	34.49	35.80	35.71	37.02	35.45	36.76	36.11	37.42
18	34.27	35.58	33.95	35.26	35.86	37.17	35.37	36.68	36.15	37.46
19	34.18	35.49	33.96	35.27	35.95	37.26	35.95	37.26	36.29	37.60
20	34.97	36.28	33.97	35.28	35.41	36.72	35.95	37.26	36.29	37.60
21	35.21	36.52	33.97	35.28	35.39	36.70	35.99	37.30	36.32	37.63
22	35.27	36.58	33.79	35.10	35.96	37.27	35.99	37.30	35.89	37.20
23	35.22	36.53	33.95	35.26	35.97	37.28	36.12	37.43	35.95	37.26
24	35.25	36.56	34.17	35.48	36.01	37.32	35.59	36.90	36.17	37.48
25	34.27	35.58	34.16	35.47	35.99	37.30	35.56	36.87	35.57	36.88
26	34.19	35.50	34.16	35.47	35.99	37.30	36.10	37.41	35.97	37.28
27	34.96	36.27	34.18	35.49	35.49	36.80	36.12	37.43	35.97	37.28
28	34.38	35.69	34.17	35.48	35.46	36.77	36.08	37.39	36.09	37.40
29	35.27	36.58	33.88	35.19	36.05	37.36	36.22	37.53	35.69	37.00
30	34.77	36.08	34.07	35.38	36.03	37.34	36.08	37.39	35.63	36.94
31	34.65	35.96	.....	.....	36.07	37.38	.....	.....	36.04	37.35

1913	January		February	
1	1036.02	1037.33	1036.17	1037.48
2	35.99	37.30	35.84	37.15
3	35.94	37.25	35.86	37.17
4	36.12	37.43	36.15	37.46
5	35.73	37.04	36.18	37.49
6	35.60	36.91	36.15	37.46
7	36.03	37.34	36.11	37.42
8	36.05	37.36	36.02	37.33
9	35.99	37.30	35.69	37.00
10	36.06	37.37	35.62	36.93
11	36.01	37.32	36.09	37.40
12	35.62	36.93	36.15	37.46
13	35.65	36.96	36.15	37.46
14	36.06	37.37	36.16	37.47
15	36.03	37.34	36.14	37.45
16	36.15	37.46	35.35	36.66
17	36.19	37.50	35.05	36.36
18	36.20	37.51	35.86	37.17
19	35.84	37.15	35.41	36.72
20	35.84	37.15	.....	.....
21	36.14	37.45	.....	.....
22	36.19	37.50	.....	.....
23	36.21	37.52	.....	.....
24	36.27	37.58	.....	.....
25	36.18	37.49	.....	.....
26	35.87	37.18	.....	.....
27	35.60	36.91	.....	.....
28	36.15	37.46	.....	.....
29	36.10	37.41	.....	.....
30	35.84	37.15	.....	.....
31	36.19	37.50	.....	.....

TABLE 23

WATER LEVELS—WINNIPEG RIVER—MINAKI, ONTARIO

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

1913	September		October		November		December	
	W. P. S. Datum	Sea-level Datum	W. P. S. Datum	Sea-level Datum	W. P. S. Datum	Sea-level Datum	W. P. S. Datum	Sea-level Datum
1			1033.14	1034.45	1032.22	1033.53	1032.22	1033.53
2			33.09	34.40	32.22	33.53	32.27	33.58
3			32.99	34.30	32.22	33.53	32.32	33.63
4			32.84	34.15	32.12	33.43	32.22	33.53
5			32.79	34.10	32.22	33.53	32.27	33.58
6			32.79	34.10	32.22	33.53	32.22	33.53
7			32.67	33.98	32.32	33.63	32.27	33.58
8			32.52	33.83	32.32	33.63	32.32	33.63
9			32.62	33.98	32.22	33.53	32.22	33.53
10			32.52	33.83	32.12	33.43	32.27	33.58
11			32.52	33.83	32.22	33.53	32.32	33.63
12			32.52	33.83	32.32	33.63	32.32	33.63
13			32.57	33.88	32.32	33.63	32.32	33.63
14			32.42	33.73	32.22	33.53	32.32	33.63
15			32.37	33.68	32.22	33.53	32.27	33.58
16			32.32	33.63	32.22	33.53	32.22	33.53
17			32.27	33.58	32.22	33.53	32.22	33.53
18			32.22	33.63	32.32	33.63	32.32	33.63
19			32.37	33.68	32.22	33.53	32.22	33.53
20			32.22	33.53	32.27	33.58	32.27	33.58
21			32.22	33.53	32.22	33.53	32.22	33.53
22			32.22	33.53	32.17	33.48	32.22	33.53
23			32.22	33.53	32.22	33.53	32.22	33.53
24	1033.64	1034.95	32.22	33.53	32.27	33.58	32.22	33.53
25	33.54	34.85	32.22	33.53	32.22	33.53	32.22	33.53
26	33.59	34.90	32.22	33.53	32.27	33.58	32.22	33.53
27	33.49	34.80	32.17	33.48	32.22	33.53	32.17	33.48
28	33.44	34.75	32.22	33.53	32.22	33.53	32.22	33.53
29	33.34	34.65	32.22	33.53	.....	.....	32.27	33.58
30	33.29	34.60	32.22	33.53	32.22	33.53	32.22	33.53
31	.....	.....	32.22	33.53	.....	.....	32.22	33.53

1914	January		February		March		April	
1	1032.22	1033.53	1032.12	1033.43	1032.12	1033.43	1032.97	1034.28
2	32.27	33.58	32.12	33.43	32.12	33.43	32.92	34.23
3	32.32	33.63	32.12	33.43	32.22	33.53	32.92	34.23
4	32.32	33.63	32.12	33.43	32.22	33.53	32.92	34.23
5	32.27	33.58	32.12	33.43	32.32	33.63	32.97	34.28
6	32.22	33.53	32.12	33.43	32.42	33.73	32.92	34.23
7	32.22	33.53	32.07	33.38	32.52	33.83	32.97	34.28
8	32.22	33.53	32.07	33.38	32.52	33.83	33.02	34.33
9	32.22	33.53	32.02	33.33	32.52	33.83	33.02	34.33
10	32.22	33.53	32.02	33.33	32.52	33.83	32.92	34.23
11	32.22	33.53	32.02	33.33	32.72	34.03	32.92	34.23
12	32.22	33.53	32.02	33.33	32.72	34.03	32.97	34.28
13	32.27	33.58	32.02	33.33	32.82	34.13	32.92	34.23
14	32.22	33.53	32.02	33.33	32.92	34.23	32.87	34.18
15	32.22	33.53	32.02	33.33	32.92	34.23	32.87	34.18
16	32.22	33.53	31.92	33.23	32.92	34.23	32.82	34.13
17	32.22	33.53	31.92	33.23	32.92	34.23	32.82	34.13
18	32.22	33.53	31.92	33.23	32.92	34.23	32.97	34.28
19	32.22	33.53	31.92	33.23	33.02	34.33	32.87	34.18
20	32.22	33.53	31.92	33.23	33.02	34.33	32.92	34.23
21	32.22	33.53	31.92	33.23	33.02	34.33	32.92	34.23
22	32.22	33.53	31.92	33.23	33.02	34.33	33.02	34.33
23	32.17	33.48	31.92	33.23	33.12	34.43	32.97	34.28
24	32.17	33.48	31.92	33.23	33.12	34.43	33.02	34.33
25	32.17	33.48	31.92	33.23	33.02	34.33	32.97	34.28
26	32.17	33.48	31.92	33.23	33.02	34.33	33.02	34.33
27	32.12	33.43	31.92	33.23	33.02	34.33	33.07	34.38
28	32.12	33.43	31.92	33.23	33.02	34.33	33.02	34.33
29	32.12	33.43	.....	.....	33.02	34.33	33.12	34.43
30	32.12	33.43	.....	.....	32.97	34.28	33.07	34.38
31	32.12	33.43	.....	.....	32.97	34.28	.....	.....

† TABLE 23—Continued

WATER LEVELS—WINNIPEG RIVER—MINAKI, ONTARIO

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

1914	MAY		JUNE		JULY		AUGUST	
	W. P. S. Datum	Sea-level Datum	W. P. S. Datum	Sea-level Datum	W. P. S. Datum	Sea-level Datum	W. P. S. Datum	Sea-level Datum
1	1033.11	1034.42	1034.51	1035.82	1035.61	1036.92	1035.56	1036.87
2	33.11	34.42	34.56	35.87	35.60	36.91	35.58	36.89
3	33.06	34.37	34.80	36.11	35.58	36.89	35.56	36.87
4	33.16	34.47	34.91	36.22	35.56	36.87	35.52	36.83
5	33.11	34.42	34.96	36.27	35.61	36.92	35.46	36.77
6	33.21	34.52	34.98	36.29	35.60	36.91	35.44	36.75
7	33.26	34.57	35.06	36.37	35.56	36.87	35.46	36.77
8	33.26	34.57	35.08	36.39	35.52	36.83	35.41	36.72
9	33.32	34.63	35.14	36.35	35.56	36.87	35.50	36.81
10	33.34	34.65	35.22	36.53	35.46	36.77	35.46	36.77
11	33.35	34.66	35.26	36.57	35.56	36.87	35.41	36.72
12	33.36	34.67	35.31	36.62	35.66	36.97	35.36	36.67
13	33.38	34.69	35.36	36.67	35.66	36.97	35.32	36.63
14	33.36	34.67	35.34	36.65	35.61	36.92	35.26	36.57
15	33.36	34.67	35.36	36.67	35.61	36.92	35.21	36.52
16	33.41	34.72	35.32	36.63	35.66	36.97	35.26	36.57
17	33.42	34.73	35.31	36.62	35.70	37.01	35.25	36.56
18	33.43	34.74	35.36	36.67	35.72	37.03	35.36	36.67
19	33.53	34.84	35.36	36.67	35.61	36.92	35.30	36.61
20	33.46	34.77	35.36	36.67	35.66	36.97	35.26	36.57
21	33.46	34.77	35.41	36.72	35.66	36.97	35.26	36.57
22	33.50	34.81	35.44	36.75	35.71	37.02	35.21	36.52
23	33.56	34.87	35.40	36.71	35.70	37.01	35.16	36.47
24	33.56	34.87	35.44	36.75	35.68	36.99	35.10	36.41
25	33.72	35.03	35.48	36.79	35.66	36.97	35.02	36.33
26	33.91	35.22	35.52	36.83	35.66	36.97	34.96	36.27
27	33.96	35.27	35.56	36.87	35.61	36.92	34.90	36.21
28	34.02	35.33	35.58	36.89	35.56	36.87	34.82	36.13
29	34.18	35.39	35.51	36.82	35.46	36.77	34.70	36.01
30	34.33	35.64	35.56	36.87	35.60	36.91	34.61	35.92
31	34.44	35.75	.....	.....	35.60	36.91	34.56	35.87

1914	SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER	
1	1034.46	1035.77	1033.94	1035.25	1033.09	1034.40	1032.92	1034.23
2	34.41	35.72	33.91	35.22	33.03	34.34	32.96	34.27
3	34.36	35.67	33.90	35.21	33.04	34.35	32.94	34.25
4	34.26	35.57	33.90	35.21	32.97	34.28	32.93	34.24
5	34.16	35.47	33.89	35.20	32.96	34.27	*32.91	34.22
6	34.06	35.37	33.88	35.19	32.93	34.24	.....	.....
7	34.01	35.32	33.86	35.17	32.89	34.20	.....	.....
8	33.96	35.27	33.84	35.15	32.92	34.23	.....	.....
9	34.04	35.35	33.86	35.17	32.86	34.17	.....	.....
10	34.00	35.31	33.87	35.18	32.92	34.23	.....	.....
11	33.94	35.25	34.04	35.35	32.90	34.21	.....	.....
12	33.91	35.22	34.11	35.42	32.88	34.19	.....	.....
13	33.94	35.25	34.02	35.33	32.89	34.20	.....	.....
14	33.96	35.27	33.96	35.27	32.90	34.21	.....	.....
15	33.94	35.25	33.97	35.28	32.96	34.27	.....	.....
16	33.96	35.27	33.84	35.15	32.91	34.22	.....	.....
17	33.94	35.25	33.74	35.05	32.94	34.25	.....	.....
18	34.00	35.31	33.63	34.94	32.86	34.17	.....	.....
19	34.01	35.32	33.50	34.81	32.95	34.26	.....	.....
20	34.02	35.33	33.46	34.77	32.91	34.22	.....	.....
21	34.01	35.32	33.38	34.69	32.95	34.26	.....	.....
22	34.06	35.37	33.33	34.64	32.92	34.23	.....	.....
23	34.06	35.37	33.29	34.60	32.91	34.22	.....	.....
24	34.01	35.32	33.24	34.55	32.92	34.23	.....	.....
25	34.00	35.31	33.19	34.50	32.96	34.27	.....	.....
26	33.98	35.29	33.13	34.44	33.00	34.31	.....	.....
27	33.96	35.27	33.06	34.37	32.95	34.26	.....	.....
28	33.96	35.27	33.04	34.35	32.93	34.24	.....	.....
29	33.97	35.28	33.03	34.34	32.91	34.22	.....	.....
30	33.96	35.27	33.04	34.35	32.94	34.25	.....	.....
31	.....	.....	33.06	34.37	.....	.....	.....	.....

† For 1915 records, see page 308.

* Station discontinued.

TABLE 24

WATER LEVELS—WINNIPEG RIVER—BELOW OLD FORT ISLAND

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

1914	October		November		December	
	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum
1			98.50	1036.42	98.54	1036.38
2			98.35	36.27	98.64	36.48
3			(2)98.43	36.35	98.65	36.49
4			98.44	36.36	(5)98.64	36.48
5			98.40	36.31		
6			98.39	36.30		
7			98.44	36.35		
8	(1)		98.30	36.20		
9	99.96	1037.88	98.29	36.19		
10	100.00	37.92	98.51	36.41		
11	100.00	37.92	98.55	36.44		
12	99.94	37.86	98.52	36.41		
13	99.96	37.88	98.54	36.43		
14	99.96	37.88	98.59	36.47		
15	99.57	37.49	98.49	36.37		
16	99.30	37.22	98.37	36.25		
17	99.16	37.08	(3)98.56	36.43		
18	98.90	36.82	98.63	36.50		
19	98.77	36.69	98.62	36.49		
20	98.82	36.74	98.62	36.48		
21	98.84	36.76	98.65	36.51		
22	98.86	36.78	98.50	36.36		
23	98.87	36.79	98.42	36.27		
24	98.73	36.65	98.51	36.36		
25	98.65	36.57	(4)98.53	36.37		
26	98.41	36.33	98.65	36.49		
27	98.52	36.44	98.61	36.45		
28	98.45	36.37	98.62	36.46		
29	98.68	36.60	98.47	36.31		
30	98.78	36.70	98.37	36.21		
31	98.78	36.70				

1. Zero of gauge Oct. 8th 937.92.
2. Zero of gauge Nov. 3rd 937.92.
3. Nov. 17th, 1914. Frozen at gauge.
4. Zero of gauge Nov. 25th 937.84.
5. Dec. 4th, 1914. Ice 6 inches thick at gauge, and frozen 400 feet out from gauge. Channel still open. Feb. 15th 1915. Channel still open.

TABLE 25

WATER LEVELS—SLOPE GAUGES ON WESTERN OUTLET

RECORDS OF JAMES C. KENNEDY

Date	DECEMBER, 1894					JANUARY, 1895							
	Gauge No. 2		Coffer Dam Site			Gauge No. 2		Coffer Dam Site			Gauge No. 3		
	Footnote	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Footnote	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Footnote	Local Datum	Sea-level Datum
1													
2							e 82.00	1042.00					
3							e 82.00	1042.00					
4							e 82.15	1042.15	e 84.58	1044.58			
5						3	e 82.40	1042.40	e 84.58	1044.58			
6													
7													
8													
9							e 83.10	1043.10					
10						4	e 83.30	1043.30					
11													
12						5	e 83.38	1043.38					
13							e 83.39	1043.39					
14						6	e 83.40	1043.40					
15						7	e 83.45	1043.45	e 84.76	1044.76	8	e 84.33	1044.33
16						9	e 83.50	1043.50				e 84.30	1044.30
17						10	e 83.50	1043.50			11	e 84.25	1044.25
18						12	e 83.52	1043.52			13	e 84.25	1044.25
19													
20						14							
21	1	e 80.75	1040.75				83.60	1043.60	e 84.69	1044.69		84.28	1044.28
22							83.70	1043.70				e 84.34	1044.34
23						15	83.70	1043.70				84.34	1044.34
24						16	83.65	1043.65				84.30	1044.30
25							83.73	1043.73				84.36	1044.36
26							83.70	1043.70				84.31	1044.31
27				* 84.72	1044.72		e 83.70	1043.70				e 84.31	1044.31
28		e 81.25	1041.25				83.76	1043.76				84.37	1044.37
29							83.85	1043.85				84.37	1044.37
30						17	f 83.80	1043.80				e 84.34	1044.34
31	2					18	83.80	1043.80				84.34	1044.34

For explanation of Notes and Abbreviations applying to this table, see Table 6, page 24. (Engrs.)

* This record is taken from Kennedy's small chart. (Engrs.)

1. Head 2.55 feet. (S. C.) Refers to head between tailwater and water level above rock fill. (Engrs.)
2. Head 3.85 feet. (S. C.) Refers to head between tailwater and water level above rock fill. (Engrs.)
3. Two readings are given for Gauge No. 2 on the small chart, 82.40 and 82.65. As the water level is rising this is entirely consistent. (Engrs.)
4. Head 5.40 feet. (S. C.) Refers to head between tailwater and water level above rock fill. (Engrs.)
5. (At upstream side of rock fill) (W.)
6. (At foot of main rapid and above rock fill) (W.)
7. (Above rock fill) (W.)
8. (In bay above main rapid) or North shore gauge. 84.76 (South shore) (W.)
9. (In bay above rock fill) (W.)
10. (In bay above rock fill) (W.)
11. (In bay above main rapid) (W.)
12. (In bay above rock fill) (W.)
13. (In bay above main rapid) (W.)
14. Head 5.89 feet. (S. C.) Refers to head between tail water and level above rock fill. (Engrs.)
15. Point of dump crumbled away by current rather more than extended at surface by the days filling. (S. C.)
16. Portion of downstream corner of southerly dump wasted away by water current somewhat affecting bridge support at that end. (S. C.)
17. Overflowing water carried away certain large stones previously projecting above water surface at upstream edge of southerly dump and about 30 ft. from point. (S. C.)
18. Low level excavation (on line north flume) ceased on 30th Jany. as also filling into channel. (S. C.)

TABLE 25—Continued

WATER LEVELS—SLOPE GAUGES ON WESTERN OUTLET

RECORDS OF JAMES C. KENNEDY

Date.	FEBRUARY, 1895															
	Gauge No. 2		Gauge No. 3		Gauge No. 5		Footnote	Gauge No. 4		Gauge No. 8		Gauge No. 6		Gauge No. 7	
	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum		Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum
1	e 83.73	1043.73	e 84.30	1044.30											
2	83.70	1043.70	84.28	1044.28											
3															
4	e 83.65	1043.65	e 84.21	1044.21											
5	e 83.61	1043.61	e 84.19	1044.19											
6	e 83.61	1043.61	e 84.17	1044.17											
7															
8	e 83.75	1043.75	e 84.25	1044.25				e 86.04	1046.04						
9	83.69	1043.69	84.21	1044.21											
10			f 84.22	1044.22											
11	83.71	1043.71	84.23	1044.23			1	e 85.95	1045.95						
12	83.75	1043.75	84.21	1044.21				85.93	1045.93						
13	83.85	1043.85	84.29	1044.29				85.95	1045.95						
14	83.96	1043.96	84.37	1044.37				86.00	1046.00						
15	84.00	1044.00	84.40	1044.40				86.02	1046.02						
16	84.12	1044.12	84.50	1044.50				86.02	1046.02						
17															
18	84.33	1044.33	84.60	1044.60				86.10	1046.10						
19	84.38	1044.38	84.67	1044.67				86.08	1046.08						
20	84.65	1044.65	84.84	1044.84				86.15	1046.15						
21	84.92	1044.92	85.10	1045.10				86.30	1046.30						
22	85.00	1045.00	85.18	1045.18				86.35	1046.35						
23	85.23	1045.23	85.41	1045.41				86.43	1046.43						
24															
25	85.27	1045.27	85.44	1045.44	85.81	1045.81		86.43	1046.43						
26	85.44	1045.44	85.58	1045.58	85.85	1045.85		86.58	1046.58						
27			85.65	1045.65	85.92	1045.92									
28	85.52	1045.52	85.58	1045.58	85.87	1045.87		86.50	1046.50						

1. Set water gauges called No. 4 about 80 feet south of old stone house on south shore. (W.)

TABLE 25—Continued

WATER LEVELS—SLOPE GAUGES ON WESTERN OUTLET

RECORDS OF JAMES C. KENNEDY

Date	March, 1895															
	Gauge No. 2		Gauge No. 3		Gauge No. 5		Gauge No. 4		Foot note	Gauge No. 8		Gauge No. 6		Gauge No. 7	
	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum		Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum
1	85.56	1045.56	85.62	1045.62	85.88	1045.88	86.54	1046.54							
2	85.54	1045.54	85.58	1045.58	85.84	1045.84	86.56	1046.56							
3															
4	85.50	1045.50	85.54	1045.54	85.81	1045.81	86.48	1046.48							
5	85.52	1045.52	85.57	1045.57	85.82	1045.82	86.50	1046.50							
6	85.50	1045.50	85.56	1045.56	85.81	1045.81	86.48	1046.48							
7	85.50	1045.50	85.55	1045.55	85.81	1045.81	86.49	1046.49				e 92.07	1052.07	e 93.12	1053.12
8	85.51	1045.51	85.57	1045.57	85.81	1045.81	85.47	1045.47							
9	85.46	1045.46	85.52	1045.52	85.78	1045.78	86.42	1046.42							
10															
11	85.42	1045.42	85.48	1045.48	85.74	1045.74	86.38	1046.38	1	87.42	1047.42	91.95	1051.95	93.00	1053.00
12	85.46	1045.46	85.52	1045.52	85.76	1045.76	86.40	1046.40							
13	85.49	1045.49	85.55	1045.55	85.78	1045.78	86.42	1046.42				91.92	1051.92	93.00	1053.00
14	85.43	1045.43	85.48	1045.48	85.72	1045.72	86.35	1046.35							
15	85.43	1045.43	85.49	1045.49	85.72	1045.72	86.34	1046.34							
16	85.45	1045.45	85.50	1045.50	85.73	1045.73	86.37	1046.37		87.22	1047.22	91.85	1051.85	92.92	1052.92
17															
18	85.40	1045.40	85.46	1045.46	85.70	1045.70	86.30	1046.30		87.15	1047.15	91.78	1051.78	92.80	1052.80
19	85.40	1045.40			85.70	1045.70	86.28	1046.28							
20	85.40	1045.40			85.70	1045.70	86.30	1046.30							
21	85.40	1045.40					e 86.30	1046.30							
22															
23	85.41	1045.41			85.69	1045.69	86.26	1046.26		87.10	1047.10	91.75	1051.75	92.75	1052.75
24															
25	85.40	1045.40			85.69	1045.69	86.25	1046.25		f 87.10	1047.10	91.65	1051.65	92.65	1052.65
26	85.40	1045.40			85.68	1045.68	86.24	1046.24				91.65	1051.65	92.65	1052.65
27	85.35	1045.35			85.60	1045.60	86.18	1046.18							
28	85.35	1045.35			85.60	1045.60	86.15	1046.15							
29	85.30	1045.30			85.59	1045.59	86.12	1046.12		86.91	1046.91	91.50	1051.50	92.52	1052.52
30	85.31	1045.31			85.60	1045.60	86.10	1046.10							

1. Below Bridge. (W.)

TABLE 25—Continued

WATER LEVELS—SLOPE GAUGES ON WESTERN OUTLET

RECORDS OF JAMES C. KENNEDY

APRIL, 1895

Date	Footnote	Gauge No. 2		Gauge No. 3		Gauge No. 5		Gauge No. 4		Gauge No. 8		Gauge No. 6		Gauge No. 7	
		Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum
1		85.33	1045.33			85.61	1045.61	86.15	1046.15						
2		85.33	1045.33			85.61	1045.61	86.15	1046.15	86.89	1046.89	91.50	1051.50	92.50	1052.50
3		85.33	1045.33			85.60	1045.60	86.15	1046.15						
4		85.35	1045.35			85.61	1045.61	86.12	1046.12	86.90	1046.90	91.58	1051.58	92.55	1052.55
5		85.29	1045.29			85.55	1045.55	86.10	1046.10						
6		85.31	1045.31			85.55	1045.55	86.12	1046.12	86.92	1046.92	91.58	1051.58	92.58	1052.58
7															
8		85.40	1045.40			85.67	1045.67	86.20	1046.20						
9		85.38	1045.38			85.63	1045.63	86.15	1046.15	86.95	1046.95	91.50	1051.50	92.53	1052.53
10		85.42	1045.42			85.65	1045.65	86.19	1046.19						
11		85.43	1045.43			85.65	1045.65	86.20	1046.20	87.00	1047.00	91.55	1051.55	92.55	1052.55
12		85.46	1045.46			85.70	1045.70	86.25	1046.25	87.00	1047.00	91.58	1051.58	92.58	1052.58
13		85.46	1045.46			85.70	1045.70	86.23	1046.23	87.00	1047.00	91.60	1051.60	92.60	1052.60
14															
15		85.44	1045.44			85.67	1045.67	86.21	1046.21						
16		85.48	1045.48			85.70	1045.70	86.23	1046.23						
17		85.48	1045.48			85.72	1045.72	86.25	1046.25	87.01	1047.01	91.58	1051.58	92.58	1052.58
18		85.50	1045.50			85.74	1045.74	86.26	1046.26						
19		85.54	1045.54			85.76	1045.76	86.28	1046.28	87.00	1047.00	91.55	1051.55	92.55	1052.55
20		85.54	1045.54			85.78	1045.78	86.30	1046.30						
21															
22															
23	1	85.63	1045.63			85.89	1045.89	86.41	1046.41	87.12	1047.12	91.73	1051.73	92.73	1052.73
24	2	85.71	1045.71			85.95	1045.95	86.50	1046.50						
25		85.67	1045.67			85.91	1045.91	86.47	1046.47						
26		85.67	1045.67			85.88	1045.88	86.42	1046.42	87.16	1047.16	91.70	1051.70	92.70	1052.70
27		85.63	1045.63			85.90	1045.90	86.45	1046.45						
28		85.65	1045.65			85.93	1045.93	86.42	1046.42	87.22	1047.22	91.73	1051.73	92.73	1052.73
29		85.75	1045.75			86.00	1046.00	86.53	1046.53						
30															
		85.80	1045.80			86.03	1046.03	86.60	1046.60	87.32	1047.32	91.95	1051.95	92.98	1052.98

1. Box gauge set this A. M. (W.)

2. Box Gauge. (W.)

TABLE 25—Continued

WATER LEVELS—SLOPE GAUGES ON WESTERN OUTLET

RECORDS OF JAMES C. KENNEDY

Date	MAY, 1895													
	Gauge No. 2		Gauge No. 3		Gauge No. 5		Gauge No. 4		Gauge No. 8		Gauge No. 6		Gauge No. 7	
	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum
1														
2	85.90	1045.90					e 86.84	1046.84						
3														
4	86.00	1046.00					87.00	1047.00	e 87.80	1047.80				
5														
6	86.12	1046.12					87.10	1047.10	87.90	1047.90	92.50	1052.50	93.60	1053.60
7	86.10	1046.10												
8	86.08	1046.08												
9	86.10	1046.10					87.10	1047.10	87.90	1047.90	92.45	1052.45	93.55	1053.55
10	e 85.95	1045.95					f 86.85	1046.85	e 87.60	1047.60	e 92.20	1052.20	e 93.25	1053.25
11														
12														
13	86.15	1046.15					87.17	1047.17	88.00	1048.00	92.55	1052.55	93.65	1053.65
14	86.25	1046.25					87.30	1047.30	88.25	1048.25	92.70	1052.70	93.85	1053.85
15	86.20	1046.20					87.25	1047.25	88.20	1048.20	92.60	1052.60	93.80	1053.80
16	86.25	1046.25					87.25	1047.25	88.20	1048.20	92.70	1052.70	93.85	1053.85
17	86.15	1046.15					87.10	1047.10	88.10	1048.10	92.40	1052.40	93.50	1053.50
18	86.15	1046.15					87.10	1047.10	87.80	1047.80	92.30	1052.30	93.40	1053.40
19														
20	86.10	1046.10					87.10	1047.10	87.80	1047.80	92.35	1052.35	93.55	1053.55
21	86.20	1046.20					87.20	1047.20	88.00	1048.00	92.60	1052.60	93.70	1053.70
22	86.25	1046.25					87.35	1047.35	88.20	1048.20	92.70	1052.70	93.80	1053.80
23	86.25	1046.25					87.30	1047.30	88.20	1048.20	92.70	1052.70	93.80	1053.80
24	86.20	1046.20					87.20	1047.20	88.10	1048.10	92.60	1052.60	93.70	1053.70
25	85.90	1045.90					86.75	1046.75	87.50	1047.50	92.00	1052.00	93.10	1053.10
26														
27	86.40	1046.40					87.60	1047.60	88.50	1048.50	93.00	1053.00	94.20	1054.20
28	86.20	1046.20					87.20	1047.20	88.10	1048.10	92.60	1052.60	93.70	1053.70
29	86.30	1046.30					87.35	1047.35	88.20	1048.20	92.70	1052.70	93.85	1053.85
30	86.25	1046.25					87.30	1047.30	88.20	1048.20	92.65	1052.65	93.80	1053.80
31	86.25	1046.25					87.30	1047.30	88.20	1048.20	92.65	1052.65	93.80	1053.80

TABLE 25—Continued

WATER LEVELS—SLOPE GAUGES ON WESTERN OUTLET

RECORDS OF JAMES C. KENNEDY

JUNE, 1895

Date	Gauge No. 2		Gauge No. 3		Gauge No. 5		Gauge No. 4		Gauge No. 8		Gauge No. 6		Gauge No. 7	
	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum
1	86.65	1046.65					87.75	1047.75	89.00	1049.00	93.35	1053.35	94.50	1054.50
2														
3	86.25	1046.25					87.30	1047.30	88.20	1048.20	92.70	1052.70	93.80	1053.80
4	86.15	1046.15					87.10	1047.10	88.10	1048.10	92.45	1052.45	93.55	1053.55
5	86.35	1046.35					87.50	1047.50	88.40	1048.40	92.90	1052.90	94.10	1054.10
6	86.60	1046.60					87.80	1047.80	88.80	1048.80	93.20	1053.20	94.40	1054.40
7	86.70	1046.70					87.90	1047.90	89.10	1049.10	93.40	1053.40	94.60	1054.60
8	86.45	1046.45					87.55	1047.55	88.60	1048.60	92.95	1052.95	94.10	1054.10
9														
10	86.85	1046.85					88.20	1048.20	89.60	1049.60	93.65	1053.65	94.90	1054.90
11	86.85	1046.85					88.20	1048.20	89.60	1049.60	93.65	1053.65	94.90	1054.90
12	87.05	1047.05					88.50	1048.50	89.90	1049.90	93.95	1053.95	95.20	1055.20
13	87.00	1047.00					88.40	1048.40	89.85	1049.85	93.90	1053.90	95.15	1055.15
14	87.00	1047.00					88.40	1048.40	89.80	1049.80	93.90	1053.90	95.15	1055.15
15	87.20	1047.20					88.60	1048.60	90.00	1050.00	94.20	1054.20	95.40	1055.40
16														
17	87.25	1047.25					88.70	1048.70	90.10	1050.10	94.30	1054.30	95.50	1055.50
18	87.40	1047.40					88.95	1048.95	90.45	1050.45	94.50	1054.50	95.75	1055.75
19	87.25	1047.25					88.80	1048.80	90.30	1050.30	94.35	1054.35	95.60	1055.60
20	87.30	1047.30					88.85	1048.85	90.35	1050.35	94.40	1054.40	95.65	1055.65
21	87.30	1047.30					88.85	1048.85	90.35	1050.35	94.40	1054.40	95.65	1055.65
22	87.35	1047.35					88.90	1048.90	90.40	1050.40	94.45	1054.45	95.70	1055.70
23														
24	87.60	1047.60					89.25	1049.25	90.65	1050.65	94.65	1054.65	95.95	1055.95
25	87.45	1047.45					89.10	1049.10	90.50	1050.50	94.50	1054.50	95.80	1055.80
26	87.40	1047.40					89.00	1049.00	90.40	1050.40	94.40	1054.40	95.70	1055.70
27	87.45	1047.45					89.00	1049.00	90.45	1050.45	94.45	1054.45	95.75	1055.75
28	87.50	1047.50					89.10	1049.10	90.55	1050.55	94.60	1054.60	95.90	1055.90
29	87.55	1047.55					89.20	1049.20	90.65	1050.65	94.70	1054.70	96.00	1056.00
30														

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TABLE 25—Continued

WATER LEVELS—SLOPE GAUGES ON WESTERN OUTLET

RECORDS OF JAMES C. KENNEDY

Date	July, 1895															
	Gauge No. 2		Gauge No. 3		Gauge No. 5		Gauge No. 4		Footnote	Gauge No. 8		Gauge No. 6		Gauge No. 7	
	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum		Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum
1	87.60	1047.60					89.30	1049.30		90.80	1050.80	94.85	1054.85	96.15	1056.15
2	87.65	1047.65					89.40	1049.40		90.90	1050.90	94.95	1054.95	96.25	1056.25
3	87.70	1047.70					89.45	1049.45		90.95	1050.95	95.00	1055.00	96.35	1056.35
4	87.70	1047.70					89.45	1049.45		91.00	1051.00	95.10	1055.10	96.45	1056.45
5	87.70	1047.70					89.45	1049.45		91.10	1051.10	95.10	1055.10	96.42	1056.42
6	87.70	1047.70					89.45	1049.45		91.10	1051.10	95.10	1055.10	96.45	1056.45
7														f 96.45	1056.45
8	87.20	1047.20					88.90	1048.90		e 90.10		94.50	1054.50	95.70	1055.70
9	87.65	1047.65					89.40	1049.40		91.10	1051.10	95.10	1055.10	96.45	1056.45
10	87.70	1047.70					89.45	1049.45		91.15	1051.15	95.15	1055.15	96.50	1056.50
11	87.70	1047.70					89.50	1049.50	1	91.90	1051.90	95.20	1055.20	96.55	1056.55
12	87.70	1047.70					89.50	1049.50		91.90	1051.90	95.20	1055.20	96.55	1056.55
13	87.80	1047.80					89.60	1049.60		92.00	1052.00	95.30	1055.30	96.65	1056.65
14															
15	87.80	1047.80					89.60	1049.60		92.00	1052.00	95.31	1055.31	96.65	1056.65
16	87.85	1047.85					89.70	1049.70		92.10	1052.10	95.40	1055.40	96.75	1056.75
17	87.70	1047.70					89.60	1049.60		92.00	1052.00	95.30	1055.30	96.65	1056.65
18	87.75	1047.75					89.65	1049.65		92.00	1052.00	95.30	1055.30	96.65	1056.65
19	87.75	1047.75					89.70	1049.70		92.00	1052.00	95.30	1055.30	96.65	1056.65
20	87.75	1047.75					89.70	1049.70		92.00	1052.00	95.30	1055.30	96.65	1056.65
21															
22	87.75	1047.75					89.70	1049.70		91.90	1051.90	95.30	1055.30	96.65	1056.65
23	87.70	1047.70					89.70	1049.70		91.90	1051.90	95.30	1055.30	96.65	1056.65
24	87.70	1047.70					89.70	1049.70		91.90	1051.90	95.30	1055.30	96.60	1056.60
25	87.80	1047.80					89.80	1049.80		92.00	1052.00	95.40	1055.40	96.60	1056.60
26	87.85	1047.85					89.85	1049.85		92.00	1052.00	95.40	1055.40	96.70	1056.70
27	87.85	1047.85													
28															
29	87.80	1047.80													
30	87.80	1047.80					89.80	1049.80		91.90	1051.90	95.50	1055.50	96.90	1056.90
31	87.80	1047.80													

1. No. 8 Gauge should be examined as to its level readings as compared with other gauges about 8th July; look doubtful. (C.)

TABLE 25—Continued

WATER LEVELS—SLOPE GAUGES ON WESTERN OUTLET

RECORDS OF JAMES C. KENNEDY

AUGUST, 1895

Date	Footnote	Gauge No. 2		Gauge No. 3		Gauge No. 5		Gauge No. 4		Gauge No. 8		Gauge No. 6		Gauge No. 7	
		Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum
1		87.85	1047.85												
2		87.75	1047.75												
3		87.80	1047.80					89.80	1049.80	91.90	1051.90	95.50	1055.50	96.90	1056.90
4															
5		87.75	1047.75												
6															
7		87.80	1047.80												
8		87.80	1047.80												
9		87.80	1047.80												
10		87.85	1047.85												
11								89.90	1049.90	91.90	1051.90	95.70	1055.70	97.00	1057.00
12															
13		87.80	1047.80												
14		87.70	1047.70					89.80	1049.80	91.80	1051.80	95.60	1055.60	96.90	1056.90
15		87.90	1047.90												
16		87.85	1047.85												
17		87.75	1047.75												
18															
19		87.70	1047.70												
20		87.65	1047.65												
21		87.75	1047.75					89.60	1049.60	91.70	1051.70	95.40	1055.40	96.70	1056.70
22		87.70	1047.70					89.70	1049.70	91.90	1051.90	95.50	1055.50	96.80	1056.80
23	1	87.80	1047.80					89.90	1049.90	92.00	1052.00	95.40	1055.40	96.90	1056.90
24		87.85	1047.85					89.90	1049.90	91.90	1051.90	95.40	1055.40	96.80	1056.80
25															
26		87.85	1047.85					89.90	1049.90	91.90	1051.90	95.40	1055.40	96.80	1056.80
27		87.85	1047.85					89.90	1049.90	91.90	1051.90	95.30	1055.30	96.80	1056.80
28		89.40	1049.40					90.50	1050.50	92.00	1052.00	95.50	1055.50	96.90	1056.90
29		89.70	1049.70					90.60	1050.60	92.00	1052.00	95.40	1055.40	96.80	1056.80
30		90.00	1050.00					90.80	1050.80	92.20	1052.20	95.40	1055.40	96.90	1056.90
31		90.10	1050.10					90.90	1050.90	92.00	1052.00	95.30	1055.30	96.70	1056.70

1. Two readings for this date are given for all gauges. The second set is identical with the first except that the record for gauges No. 2 and No. 4 is 87.90 and 90.00 instead of 87.80 and 89.90. The first is presented above. (Engrs.)

TABLE 25—Continued

WATER LEVELS—SLOPE GAUGES ON WESTERN OUTLET

RECORDS OF JAMES C. KENNEDY

Date.	SEPTEMBER, 1895													
	Gauge No. 2		Gauge No. 3		Gauge No. 5		Gauge No. 4		Gauge No. 8		Gauge No. 6		Gauge No. 7	
	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum	Local Datum	Sea-level Datum
1														
2	90.35	1050.35					91.10	1051.10	92.20	1052.20	95.30	1055.30	96.70	1056.70
3	90.40	1050.40					91.10	1051.10	92.20	1052.20	95.30	1055.30	96.70	1056.70
4	90.40	1050.40					91.10	1051.10	92.20	1052.20	95.30	1055.30	96.70	1056.70
5	90.40	1050.40					91.10	1051.10	92.20	1052.20	95.30	1055.30	96.60	1056.60
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														
25														
26														
27														
28														
29														
30														
31														

TABLE 26

WATER LEVELS—LAKE OF THE WOODS—SHOWING RELATION OF LAKE LEVELS TO TAIL WATER LEVELS—1892–95

RISING STAGE

Date	*Lake Level	Tail Water Level Sea-level Datum		Date	Lake Level	Tail Water Level Sea-level Datum	
		*Norman	†Keewatin			Norman	Keewatin
1893				1894			
May 3	1058.00	1038.73	1038.63	May 30	1059.30	1041.30	1041.20
May 9	58.30	39.80	39.70	June 11	59.74	42.10	42.00
May 15	58.90	40.40	40.30	June 19	60.10	42.65	42.45
May 26	59.20	41.40	41.30	June 25	60.35	43.10	42.90
May 27	59.30	41.55	41.45	June 30	60.40	43.35	43.15
June 22	59.75	42.58	42.38	1895			
June 27	60.00	42.75	42.55	Apr. 30	56.93	37.02	36.92
July 3	60.05	42.78	42.58	May 4	57.20	37.50	37.40
1894				May 31	57.45	38.10	38.00
Apr. 18	56.65	35.90	35.80	June 12	58.25	39.50	39.40
Apr. 24	57.10	36.80	36.70	June 22	58.55	40.35	40.25
Apr. 28	57.40	37.70	37.60	June 28	58.75	40.50	40.40
May 4	57.85	38.70	38.60	July 2	58.95	40.85	40.75
May 12	58.40	39.85	39.75	July 10	59.00	41.10	41.00
May 25	59.10	41.00	40.90				

FALLING STAGE

1892				1894			
Nov. 10	1060.30	1043.30	1043.10	Feb. 5	1057.00	1037.00	1036.90
Nov. 17	60.10	43.10	42.90	Feb. 28	56.70	36.30	36.20
Nov. 22	60.00	42.80	42.60				
Nov. 25	59.90	42.70	42.50	Aug. 2	60.15	43.20	43.00
				Aug. 8	60.00	43.10	42.90
Dec. 6	59.66	42.20	42.10	Aug. 7	60.20	43.20	43.00
Dec. 13	59.50	41.90	41.80	Aug. 28	59.60	42.50	42.30
Dec. 17	59.40	41.80	41.70				
				Sept. 5	59.68	42.35	42.25
1893				Sept. 15	59.40	42.00	41.90
Jan. 3	59.10	41.10	41.00	Sept. 26	59.00	41.00	40.90
Jan. 10	58.90	40.90	40.80				
				Oct. 1	58.60	40.50	40.40
Feb. 9	58.45	39.70	39.60	Oct. 8	58.60	40.40	40.30
				Oct. 26	58.40	40.20	40.10
Mar. 1	58.20	39.40	39.30	Oct. 31	58.48	40.10	40.00
Mar. 10	58.00	38.90	38.80				
				Nov. 5	58.28	39.90	39.80
Sept. 6	59.50	42.20	42.10	Dec. 3	57.96	39.30	39.20
Sept. 19	59.20	41.75	41.65				
Sept. 27	58.90	41.10	41.00	1895			
				Jan. 12	57.45	37.93	37.83
Oct. 7	58.95	41.05	40.95	Jan. 26	57.38	37.65	37.55
Oct. 9	58.70	40.82	40.72	Feb. 16	57.13	37.15	37.05
				Feb. 27	57.08	36.80	36.70
Oct. 13	58.70	40.75	40.65				
Oct. 18	58.55	40.45	40.35	Mar. 16	56.92	36.58	36.48
Oct. 28	58.70	40.00	39.90	Mar. 23	56.80	36.30	36.20
				Mar. 29	56.72	36.25	36.15
Nov. 20	57.80	39.00	38.90				
Nov. 23	57.80	38.70	38.60	Aug. 21	59.20	41.40	41.30
				Aug. 27	59.00	41.40	41.30
Dec. 3	57.60	38.50	38.40	Sept. 19	58.80	41.05	40.95
Dec. 12	57.60	38.20	38.10				

*Lake levels and Tail Water levels at Norman were selected from Table 6.

†Tail Water levels at Keewatin were computed from Tail Water levels at Norman by the subtraction of from 0.1 to 0.2 foot, according to stage.

TABLE 27

RELATION BETWEEN VARIOUS GAUGES—LAKE OF THE WOODS—WESTERN OUTLET

RECORDS OF JAMES C. KENNEDY

1895	Elevation—Sea-level Datum			Fall Between Various Gauges.			
	Lake	Gauge No. 7	Tail Water	Lake to 7	7 to 8	7 to 4	7 to 2
Mar. 11	1056.95	1053.00	1036.45	3.95	.....	6.62	7.58
Mar. 13	56.96	53.00	36.50	3.96	.....	6.58	7.51
Mar. 16	56.92	52.92	*36.65	4.00	5.70	6.55	7.47
Mar. 18	56.89	52.80	*36.55	4.09	5.65	6.50	7.40
Mar. 23	56.80	52.75	*36.40	4.05	5.65	6.49	7.34
Mar. 26	56.78	52.65	*36.40	4.13	.....	6.41	7.25
Mar. 29	56.72	52.52	*36.40	4.20	5.61	6.40	7.22
Apr. 2	56.70	52.50	36.40	4.20	5.61	6.35	7.17
Apr. 4	56.72	52.55	36.40	4.17	5.65	6.43	7.20
Apr. 6	56.74	52.58	36.40	4.16	5.66	6.46	7.27
Apr. 9	56.73	52.53	36.52	4.20	5.58	6.38	7.15
Apr. 11	56.75	52.55	36.55	4.20	5.55	6.35	7.12
Apr. 12	56.76	52.58	36.60	4.18	5.58	6.33	7.12
Apr. 17	56.75	52.58	36.68	4.17	5.57	6.33	7.10
Apr. 19	56.75	52.55	36.60	4.20	5.55	6.27	7.01
Apr. 22	56.81	52.73	36.75	4.08	5.61	6.32	7.10
Apr. 25	56.83	52.70	36.75	4.13	5.54	6.28	7.03
Apr. 27	56.85	52.73	36.75	4.12	5.51	6.31	7.08
Apr. 30	56.93	52.98	36.92	3.95	5.66	6.38	7.18
May 6	57.25	53.60	37.60	3.65	5.70	6.50	7.48
May 9	57.23	53.55	37.77	3.68	5.65	6.45	7.45
May 13	57.27	53.65	37.65	3.62	5.65	6.48	7.50
May 14	57.45	53.85	37.85	3.60	5.60	6.55	7.60
May 17	57.25	53.50	37.90	3.75	5.40	6.40	7.35
May 18	57.20	53.40	37.85	3.80	5.60	6.30	7.25
May 20	57.30	53.55	37.80	3.75	5.75	6.45	7.45
May 22	57.45	53.80	37.85	3.65	5.60	6.45	7.55
May 24	57.35	53.70	37.95	3.65	5.60	6.50	7.50
May 25	.....	53.10	37.75	.....	5.60	6.35	7.20
May 27	57.60	54.20	37.90	3.40	5.70	6.60	7.80
May 28	57.35	53.70	38.00	3.65	5.60	6.50	7.50
May 29	57.45	53.85	38.00	3.60	5.65	6.50	7.55
May 30	57.40	53.80	38.00	3.60	5.60	6.50	7.55
June 1	57.85	54.50	38.35	3.35	5.50	6.75	7.85
June 3	57.45	53.80	38.10	3.65	5.60	6.50	7.55
June 5	57.55	54.10	38.20	3.45	5.70	6.60	7.75
June 6	57.75	54.40	38.40	3.35	5.60	6.60	7.80
June 7	57.85	54.60	38.75	3.25	5.50	6.70	7.90
June 8	57.60	54.10	38.65	3.50	5.50	6.55	7.65
June 11	58.05	54.90	39.20	3.15	5.30	6.70	8.05
June 12	58.25	55.20	39.40	3.05	5.30	6.70	8.15
June 13	58.20	55.15	39.40	3.05	5.30	6.75	8.15
June 15	58.35	55.40	39.60	2.95	5.40	6.80	8.20
June 17	58.45	55.50	39.80	2.95	5.40	6.80	8.25
June 18	58.60	55.75	40.15	2.85	5.30	6.80	8.35
June 19	58.45	55.60	40.15	2.85	5.30	6.80	8.35
June 20	58.50	55.65	40.20	2.85	5.30	6.80	8.35
June 22	58.55	55.70	40.25	2.85	5.30	6.80	8.35
June 24	58.75	55.95	40.50	2.80	5.30	6.70	8.35
June 25	58.60	55.80	40.35	2.80	5.30	6.70	8.35
June 26	58.55	55.70	40.30	2.85	5.30	6.70	8.30
June 27	58.50	55.75	40.35	2.75	5.30	6.75	8.30
June 28	58.75	55.90	40.40	2.85	5.35	6.80	8.40
June 29	58.80	56.00	40.55	2.80	5.35	6.80	8.45
July 1	58.90	56.15	40.65	2.75	5.35	6.85	8.55
July 2	58.95	56.25	40.75	2.70	5.35	6.85	8.60
July 3	59.00	56.35	40.90	2.65	5.40	6.90	8.65
July 4	59.00	56.45	40.90	2.55	5.45	7.00	8.75
July 5	59.00	56.42	40.90	2.58	5.32	6.97	8.72
July 6	59.00	56.45	41.00	2.55	5.35	7.00	8.75
July 9	58.95	56.45	40.90	2.50	5.35	7.05	8.80
July 10	59.00	56.50	41.00	2.50	5.35	7.05	8.80
July 16	59.20	56.75	41.30	2.45	.....	7.05	8.90
July 18	59.15	56.65	41.30	2.50	.....	7.00	8.90
July 19	59.20	56.65	41.30	2.55	.....	6.95	8.90
July 22	59.20	56.65	41.40	2.55	.....	6.95	8.90
July 24	59.25	56.60	41.50	2.65	.....	6.90	8.90
July 26	59.30	56.70	41.70	2.60	.....	6.85	8.85
Aug. 2	59.25	56.90	41.50	2.35	.....	7.10	9.15
Aug. 10	59.50	57.00	41.50	2.50	.....	7.10	9.15
Aug. 13	59.30	56.90	41.50	2.40	.....	7.10	9.10
Aug. 20	59.15	56.70	41.35	2.45	.....	7.10	9.05
Aug. 21	59.20	56.80	41.30	2.40	.....	7.10	9.05
Aug. 23	59.15	56.90	41.30	2.25	.....	7.00	9.10
Aug. 24	59.10	56.80	41.30	2.30	.....	6.90	8.95
Aug. 27	59.00	56.80	41.30	2.20	.....	6.90	8.95
Aug. 28	59.20	56.90	41.20	2.30	.....	6.40	7.50
Aug. 31	59.00	56.70	41.20	2.30	.....	5.80	6.60
Sept. 2	59.00	56.70	41.20	2.30	.....	5.60	6.35
Sept. 5	59.00	56.80	41.20	2.40	.....	5.50	6.20

* Estimated on account of shift of gauge found on March 30.

† TABLE 28

RELATION BETWEEN VARIOUS GAUGES—LAKE OF THE WOODS—WESTERN OUTLET

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

1913	Discharge c. f. s.	Gauge No. 1 or Lake Sea-level Datum	Fall (1) Lake to No. 3	Fall (2) Lake to No. 11	1914	Discharge c. f. s.	Gauge No. 1 or Lake Sea-level Datum	Fall (1) Lake to No. 3	Fall (2) Lake to No. 11
Aug. 26	12815	1060.58	0.32	1.33	Jan. 6	5554	1060.10	0.06	0.19
27	13418	60.76	0.34	1.37	9	5272	60.16	0.06	0.21
28	13253	60.53	0.31	1.31	13	5154	60.13	0.12	.....
29	13250	60.57	0.35	1.34	28	5377	60.03	0.04	0.17
30	13219	60.67	0.32	1.38	Feb. 4	5425	60.17	0.07	*0.26
Sept. 1	13243	1060.68	0.34	1.35	9	5403	1060.14	0.04	0.19
3	12609	60.49	0.32	1.31	17	5431	60.17	0.07	0.20
5	12721	60.53	0.33	1.32	24	7015	60.12	0.10	0.39
9	13198	60.76	0.35	1.37	26	8278	60.11	0.11	0.48
20	11677	59.74	0.49	1.15	Mar. 3	8117	60.09	0.13	0.62
21	11825	1059.84	0.30	1.17	5	7824	1060.06	0.13	0.60
22	11167	60.12	0.25	0.96	20	8013	59.96	0.11	0.48
23	8434	60.15	0.15	0.56	24	7774	59.95	0.13	.....
24	7200	60.04	0.14	0.49	27	7782	59.93	0.11	0.51
25	7698	60.06	0.11	0.50	31	7744	59.94	0.13	.....
26	7543	1060.08	0.21	0.49	Apr. 2	7919	1059.96	0.10	*0.52
27	6072	60.16	0.04	0.28	9	7870	59.96	0.11	*0.49
28	5831	60.13	0.05	0.30	15	7759	59.88	0.17	0.42
29	5829	59.97	0.05	0.30	17	7238	59.92	0.24	0.48
30	5568	60.10	0.06	0.30	22	7876	60.07	0.15	0.46
Oct. 1	5517	1060.02	0.06	0.29	25	8371	1060.14	0.16	0.51
2	5577	60.07	0.03	0.28	27	8200	60.14	0.19	0.52
3	5722	60.06	0.08	0.29	29	8447	60.18	0.20	0.49
4	5419	59.92	0.05	0.28	May 1	8445	60.26	0.19	.....
5	5559	59.60	0.06	0.28	9	8840	60.51	0.15	0.54
6	5759	1060.04	0.05	0.29	15	8905	1060.63	0.19	0.57
23	5841	60.27	0.06	0.30	19	9208	60.55	0.06	0.44
25	5540	60.15	0.06	0.29	23	12037	60.80	0.23	0.92
28	5235	59.71	0.04	0.27	27	13320	60.90	0.36	1.26
30	5530	60.18	0.05	0.27	June 5	15154	61.08	0.42	1.52
Nov. 1	5515	1060.27	0.02	0.25	12	15647	1061.31	0.41	1.65
4	5540	60.25	0.01	0.22	19	17019	61.36	0.45	*1.93
6	5503	60.19	0.05	0.27	26	18342	61.13	0.62	*2.32
10	5492	60.06	0.05	0.25	30	18519	61.20	0.58	*2.39
12	5388	60.05	0.01	0.24	July 10	18221	61.08	0.56	*2.27
14	5651	1060.17	0.04	0.26	27	17645	1061.07	0.66	*2.42
17	5438	60.17	0.03	0.25	Aug. 8	16452	60.83	0.67	*2.32
19	5515	60.19	0.03	0.25	15	16725	60.69	0.65	.....
21	5612	60.08	0.03	0.24	21	16255	60.45	0.61	*2.20
24	5725	60.16	0.03	0.26	Sept. 12	11151	60.57	0.26	0.88
26	5303	1060.07	0.06	0.25	22	10468	1060.51	0.48	.....
27	5335	60.19	0.02	0.25	29	10622	60.47	0.27	*0.89
28	5527	60.10	0.03	0.26	Oct. 3	11015	60.50	0.21	*0.86
29	5522	60.20	0.04	0.27	Nov. 9	7713	60.90	0.17	0.42
Dec. 2	5239	60.15	0.04	0.26	11	7395	60.67	0.14	0.37
5	5467	1060.13	0.04	0.24	27	7203	1060.90	0.24	0.47
29	5406	60.10	0.06	0.21	Dec. 12	7517	60.77	0.01	*0.35
					29	7357	60.81	0.17	*0.40

* The reading for No. 11 on this date was missing and No. 12 was substituted in obtaining fall. (Engrs.)
(1) M. H. S. Gauge No. 3 corresponds in approximate location to J. C. Kennedy's Gauge No. 7. (Engrs.)
(2) M. H. S. Gauge No. 11 corresponds in approximate location to J. C. Kennedy's Gauge No. 2. (Engrs.)
† For 1915 records see page 309.

TABLE 29

ELEVATIONS OF HIGH WATER MARKS AND MISCELLANEOUS WATER LEVELS BELOW OUTLETS OF LAKE OF THE WOODS

COMPILED LARGELY FROM RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

Date	Elevation of Water Surface			Remarks
	Keewatin [1]	Above Rapids	Below Rapids	
July 1, 1907 [3]	1038.80	[2] 1037.25	[2] 1035.45	At Throat Rapids
Oct. 8, 1907	1041.50	[2] 1040.05	[2] 1037.15	Do.
May 8, 1908	1041.10	[2] 1039.65	[2] 1036.45	Do.
Nov. 20, 1908	1038.00	[2] 1036.95	[2] 1034.95	Do.
Dec. 14, 1908	1037.35	[2] 1036.15		Do.
H. W. M. (lower green)		[2] 1044.59	[2] 1040.55	Do.
Sept. 11, 1911	1035.45		[4] 1033.11	From M. H. S. Profile of Winnipeg River
H. W. M. (lower black)			[4] 1039.24	Do.
Sept. 15, 1911	1035.45		[5] 1033.52	Do.
Sept. 16, 1911	1035.45	[6] 1034.57		Do.
Sept. 20, 1911	1035.40	[7] 1034.74		Do.
Sept. 20, 1911	1035.40	[8] 1034.94		Do.
H. W. M. (lower green)		[6] 1044.47		Do.
H. W. M. (lower black)			[9] 1039.93	Do.
H. W. M. (lower green)		[10] 1045.09		Do.
H. W. M. (lower green)		[8] 1045.35		Do.
Apr. 28, 1913	1038.84		[11] 1034.86	At Throat Rapids
Apr. 29, 1913	1039.17	[11] 1037.13	[11] 1035.09	Do.
Oct. 6, 1914	1038.52	[11] 1037.09	[11] 1035.39	Do.
H. W. M. (lower green)		[11] 1044.56	[11] 1040.58	Do.
H. W. M. (upper green)		[11] 1046.03	[11] 1041.69	Do.
May 14, 1914	1037.81	[12] 1036.27	[12] 1034.87	At Dalles Rapids
Aug. 24, 1914	1040.65	[12] 1038.96	[12] 1036.76	Do.
Oct. 5, 1914	1038.42	[12] 1036.95	[12] 1035.38	Do.
Oct. 10, 1914	1038.64	[12] 1037.16	[12] 1035.56	Do.
Oct. 31, 1914	1037.17	[12] 1035.86	[12] 1034.53	Do.
H. W. M. (upper green)		[12] 1045.69	[12] 1041.04	Do.
H. W. M. (lower green)		[12] 1044.42	[12] 1040.19	Do.
H. W. M. (lower black)			[13] 1039.78	Do.
H. W. M. (upper green)	[13] 1047.80	1045.69	[14] 1041.31	Selected for discharge investigations
H. W. M. (lower green)	[13] 1046.35	1044.42	[14] 1040.19	Do.
H. W. M. (upper black)			[15] 1039.51	
H. W. M. (lower black)			[15] 1039.16	

[1] The elevations of water surface at Keewatin, previous to 1913, are taken from the mean tail water line given on the graphs.

[2] Elevations from plan of Throat Rapids accompanying report of Department of Public Works, Canada, for 1908–1909.

[3] Fall of 0.14 foot at Rapids two miles above Throat Rapids. From plan of National Transcontinental Railway dated July, 1907.

[4] One-fourth mile above Hudson Bay Co. Warehouse at Whitedog Rapids.

[5] At foot of Dalles Rapids, slightly below W. P. S. B. M. 219.

[6] At head of Dalles Rapids at W. P. S. B. M. 220.

[7] Slightly above W. P. S. B. M. 220.

[8] Three miles above head of Dalles Rapids at W. P. S. B. M. 222.

[9] At foot of Dalles Rapids.

[10] One and one-quarter miles above head of Dalles Rapids at W. P. S. B. M. 221.

[11] Elevations from Manitoba Hydrographic Survey "Plan of Throat Rapids." Fall of 0.38 foot at Rapids two miles above Throat Rapids on April 29, 1913.

[12] Elevations from Manitoba Hydrographic Survey "Sketch Plan of Dalles Rapids."

[13] H. W. Marks at Keewatin refer to the marks about 350 feet below the north end of the Keewatin Traffic Bridge. Elevations 1045.04 and 1046.49, W. P. S., or 1045.35 and 1047.80 Sea Level Datum. The marks refer to the lower and to the upper edges of the green band.

[14] Mean of several measurements to well defined marks between The Dalles Rapids and Minaki. The mean of these measurements was 4.80 and 5.92 feet above a water level of 1035.39 on October 5, 1914.

[15] 200 feet above meter section, North Channel, Whitedog Rapids.

NOTE: Whenever the terms "H. W. M. (upper green)" and "H. W. M. (lower green)" are used, reference is made to the upper and to the lower edges of a greenish lichen band which appears, with varying degrees of distinctness, on the rock banks of the Winnipeg River. The upper edge of this greenish band is also the lower edge of the coarse, dark lichen, and represents the highest mark on the rocks indicating a high water stage. The lower edge of the greenish lichen is more clearly defined than the lower edge of the coarse, dark lichen, and represents a stage which either prevailed for a longer time or recurred more frequently than the stage which formed the upper mark. In several places a black lichen band appears immediately below the green band. This black band is several tenths of a foot in width, and the upper and lower edges are designated as "H. W. M. (upper black)," and "H. W. M. (lower black)," respectively.

In those few instances in which definite information as to which water mark was referred to was not available, the designation used is based on the elevation given for the mark.

TABLE 30

LAKE AND TAIL WATER LEVELS AT HIGH STAGES AFTER COMPLETION OF NORMAN DAM AND REMOVAL OF ROLLERWAY

RECORDS TAKEN FROM LAKE AND TAIL WATER GRAPHS

See Plate 111

Date	Foot-note	Lake	Tail Water Keewatin	Date	Foot-note	Lake	Tail Water Keewatin
1899				1900			
June 10	1	1061.08	1045.05	Oct. 31	7	1061.98	1046.05
20		61.40	45.50				
30		61.70	45.80	Nov. 10		62.27	46.30
				20		62.35	46.45
July 10	2	62.03	46.15				
20	3	62.10	46.35	1905			
31	4	62.10	46.35	Aug. 20	8	62.12	46.25
				31		62.10	46.25
Aug. 10		62.03	46.20				
20		61.92	46.05	Sept. 10	9	62.00	46.10
31	5	61.70	45.80				
Sept. 10		61.45	45.50				
20	6	61.15	45.15				

1899

1. June 8. The remaining logs were removed this week. (R. B.) June 11. Stop logs are all out. Drift-wood will all be cleared tomorrow at noon. Now would be the time to put in the boom. (S)

2. July 10. The water is not quite as high yet as it was in (97). The stop logs are all out. (S)

3. July 24. 24th the water attained the height of 1897, but has gone down again. (S)

4. July 27. All the variation in the water this week has been caused by the wind. Rat Portage Lumber Co. let all the drift wood in their boom down the river this week. The greater part of it I managed to get through the flumes except some of the larger trees and logs that got side ways across the face of the piers which does not effect the free discharge of the water through the dam however. (R. B.) & (S)

5. Aug. 28. The Lake has commenced to go down as you will observe but very slow. (S)

6. Sept. 25. Commenced putting in stop logs. (R. B.)

1900

7. Oct. 15. All logs out except three in bottom. (R. B.) October 17: All the logs are out now except a row of three in the bottom. The water is not discharging out of the dam faster than it is coming in at the mouth of the Wpg. River as shown by the dam getting lower while the lake is still rising so that it would not discharge any faster out of the lake with the three bottom logs out and as the mud on the upper side of the dam is about level with the top of the third log they could not be replaced properly if removed. (S)

1905

8. July 21-31. Have taken out 130 logs up to date. Dock at Norman floating. The lake is higher than what I have got on the report. It has lowered five inches according to gauge put on a week ago but stays same on dock. (S) August 7-12: On the 7th, 8th, 9th, and 12th, took out some driftwood and 36 stop logs water raised up 5 inches. (R. B.) (S)

9. Sept. —. Put in fifty logs on the 21st, 22nd, 23rd, as you can see by the report it lowered tail water. Water stands on the same level at Norman. (R. B.) & (S)

TABLE 31

WATER LEVELS—RAINY LAKE—RANIER, MINN.

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. Datum]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1911												
1	.....	.....	.....	.....	.....	.....	.....	.....	493.56	493.20	492.92	492.58
2	.....	.....	.....	.....	.....	.....	.....	.....	493.55	493.20	492.82	492.56
3	.....	.....	.....	.....	.....	.....	.....	.....	493.53	493.20	492.82	492.54
4	.....	.....	.....	.....	.....	.....	.....	.....	493.53	493.20	492.85	492.52
5	.....	.....	.....	.....	.....	.....	.....	.....	493.53	493.20	492.86	492.51
6	.....	.....	.....	.....	.....	.....	.....	.....	493.52	493.20	492.86	492.50
7	.....	.....	.....	.....	.....	.....	.....	.....	493.50	493.20	492.82	492.50
8	.....	.....	.....	.....	.....	.....	.....	.....	493.48	493.20	492.83	492.50
9	.....	.....	.....	.....	.....	.....	.....	.....	493.43	493.20	492.79	492.50
10	.....	.....	.....	.....	.....	.....	.....	.....	493.44	493.20	492.70	492.48
11	.....	.....	.....	.....	.....	.....	.....	.....	493.40	493.20	.....	492.46
12	.....	.....	.....	.....	.....	.....	.....	.....	493.40	493.20	492.64	492.44
13	.....	.....	.....	.....	.....	.....	.....	.....	493.39	493.20	492.71	492.42
14	.....	.....	.....	.....	.....	.....	.....	.....	493.35	493.20	492.76	492.40
15	.....	.....	.....	.....	.....	.....	.....	.....	493.35	493.18	492.80	492.38
16	.....	.....	.....	.....	.....	.....	.....	.....	493.35	493.18	492.80	492.36
17	.....	.....	.....	.....	.....	.....	.....	.....	493.34	493.18	492.80	492.35
18	.....	.....	.....	.....	.....	.....	.....	.....	493.26	493.16	492.80	492.35
19	.....	.....	.....	.....	.....	.....	.....	.....	493.29	493.13	492.80	492.33
20	.....	.....	.....	.....	.....	.....	.....	493.60	493.29	493.12	492.76	492.31
21	.....	.....	.....	.....	.....	.....	.....	493.64	493.29	493.12	492.74	492.29
22	.....	.....	.....	.....	.....	.....	.....	493.59	493.29	493.12	492.73	492.27
23	.....	.....	.....	.....	.....	.....	.....	493.55	493.29	493.09	492.72	492.25
24	.....	.....	.....	.....	.....	.....	.....	493.52	493.26	493.08	492.71	492.23
25	.....	.....	.....	.....	.....	.....	.....	493.52	493.24	493.05	492.70	492.22
26	.....	.....	.....	.....	.....	.....	.....	493.54	493.20	493.03	492.68	492.20
27	.....	.....	.....	.....	.....	.....	.....	493.60	493.20	493.00	492.66	492.18
28	.....	.....	.....	.....	.....	.....	.....	493.61	493.20	492.89	492.64	492.17
29	.....	.....	.....	.....	.....	.....	.....	493.60	493.21	492.92	492.62	492.16
30	.....	.....	.....	.....	.....	.....	.....	493.61	493.20	492.92	492.60	492.15
31	.....	.....	.....	.....	.....	.....	.....	493.60	.....	492.92	.....	492.14
1912												
1	492.12	491.36	490.74	489.91	490.42	492.92	495.46	496.38	496.34	496.28	496.04	495.45
2	492.10	491.32	490.72	489.87	490.48	493.06	495.50	496.34	496.33	496.26	496.02	495.45
3	492.08	491.30	490.70	489.83	490.56	493.12	495.56	496.31	496.36	496.26	496.01	495.45
4	492.06	491.28	490.68	489.81	490.61	493.24	495.62	496.29	496.37	496.27	496.00	495.41
5	492.04	491.26	490.64	489.80	490.72	493.34	495.66	496.30	496.38	496.27	495.98	495.38
6	492.02	491.24	490.62	489.78	490.75	493.42	495.68	496.32	496.39	496.25	495.98	495.35
7	492.00	491.22	490.59	489.78	490.77	493.54	495.78	496.31	496.34	496.26	495.96	495.33
8	491.98	491.20	490.56	489.80	490.89	493.62	495.83	496.29	496.41	496.27	495.86	495.31
9	491.96	491.20	490.54	489.75	491.01	493.72	495.86	496.28	496.32	.....	495.92	495.28
10	491.94	491.19	490.52	489.75	491.08	493.81	495.88	496.26	496.30	.....	495.90	495.25
11	491.92	491.18	490.50	489.75	491.16	493.92	495.91	496.24	496.29	.....	495.90	495.22
12	491.90	491.18	490.48	489.75	491.24	494.00	495.98	496.18	496.28	.....	495.89	495.19
13	491.88	491.16	490.45	489.76	491.31	494.05	496.02	496.15	496.28	.....	495.88	495.16
14	491.86	491.12	490.41	489.78	491.37	494.12	496.03	496.20	496.26	.....	495.84	495.12
15	491.84	491.10	490.37	489.78	491.46	494.22	496.02	496.20	496.27	496.25	495.81	495.10
16	491.81	491.08	490.33	489.82	491.55	494.28	496.06	496.22	496.25	496.23	495.77	495.09
17	491.76	491.06	490.31	489.87	491.58	494.40	496.08	496.27	496.24	496.25	495.75	495.08
18	491.73	491.05	490.30	489.90	491.66	494.51	496.08	496.24	496.20	496.19	495.73	495.06
19	491.69	491.04	490.27	489.91	491.80	494.58	496.09	496.23	496.21	496.20	495.73	495.04
20	491.64	491.03	490.23	489.91	491.88	494.65	496.16	496.22	496.16	496.24	495.72	495.02
21	491.63	491.02	490.20	489.93	491.96	494.72	496.19	496.19	496.40	496.17	495.65	495.00
22	491.62	491.00	490.18	489.96	492.02	494.78	496.24	496.20	496.09	496.16	495.65	494.98
23	491.60	490.98	490.16	489.97	492.10	494.84	496.28	496.22	496.11	496.16	495.65	494.96
24	491.56	490.96	490.14	489.99	492.22	494.90	496.28	496.27	.....	496.12	495.62	494.95
25	491.54	490.91	490.11	490.03	492.26	495.00	496.28	496.27	.....	496.10	495.59	494.93
26	491.50	490.86	490.07	490.10	492.42	495.06	496.29	496.27	496.24	496.09	495.56	494.91
27	491.48	490.81	490.03	490.19	492.55	495.14	496.29	496.26	496.26	496.08	495.53	494.89
28	491.45	490.78	490.00	490.22	492.66	495.19	496.40	496.30	496.26	496.08	495.49	494.87
29	491.42	490.76	489.98	490.29	492.71	495.27	496.39	496.31	496.25	496.06	495.42	494.85
30	491.40	.....	489.96	490.36	492.76	495.42	496.38	496.33	496.27	496.05	495.44	494.85
31	491.38	.....	489.93	.....	492.81	.....	496.38	496.33	.....	496.05	.....	494.83

* TABLE 31—Continued

WATER LEVELS—RAINY LAKE—RANIER, MINN.

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. Datum]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1913												
1	494.81	493.98	493.00	491.93	492.15	494.45	497.12	497.35	497.38	496.95	496.76	496.59
2	494.78	493.95	492.98	491.90	492.19	494.57	497.19	497.35	497.34	496.96	496.76	496.54
3	494.75	493.91	492.95	491.87	492.22	494.72	497.13	497.39	497.34	496.99	496.76	496.51
4	494.72	493.88	492.92	491.84	492.25	494.82	497.18	497.37	497.34	497.01	496.76	496.53
5	494.70	493.84	492.87	491.80	492.31	494.99	497.20	497.39	497.29	497.08	496.76	496.55
6	494.69	493.80	492.82	491.77	492.37	495.12	497.32	497.40	497.32	497.07	496.76	.....
7	494.67	493.77	492.75	491.75	492.39	495.25	497.35	497.35	497.34	496.97	496.76	.....
8	494.65	493.73	492.70	491.74	492.42	495.40	497.35	497.35	497.33	496.96	496.76	.....
9	494.63	493.70	492.68	491.68	492.47	495.52	497.37	497.42	497.32	496.98	496.76	.....
10	494.61	493.66	492.66	491.65	492.51	495.64	497.37	497.46	497.29	496.97	496.76	.....
11	494.59	493.62	492.63	491.65	492.56	495.76	497.35	497.37	497.32	496.99	496.76	496.07
12	494.59	493.60	492.60	491.64	492.62	495.89	497.45	497.33	497.31	497.05	496.76	496.03
13	494.57	493.56	492.57	491.64	492.66	496.02	497.45	497.33	497.26	497.04	496.76	496.03
14	494.53	493.52	492.53	491.68	492.70	496.11	497.47	497.33	497.24	497.04	496.76	496.03
15	494.46	493.49	492.50	491.69	492.76	496.20	497.42	497.42	497.21	497.03	496.76	496.00
16	494.43	493.46	492.45	491.71	492.83	496.29	497.45	497.35	497.21	497.00	496.69	495.91
17	494.41	493.42	492.42	491.75	492.71	496.37	497.42	497.40	497.19	496.98	496.67	495.91
18	494.39	493.37	492.38	491.79	492.98	496.49	497.41	497.37	497.15	496.95	496.66	495.91
19	494.38	493.33	492.35	491.81	493.05	496.56	497.40	497.34	497.14	496.97	496.66	495 82
20	494.36	493.27	492.32	491.82	493.11	496.63	497.38	497.33	497.15	496.95	496.65	495.84
21	494.31	493.23	492.30	491.84	493.20	496.69	497.37	497.26	497.12	496.95	496.65	.....
22	494.27	493.20	492.27	491.86	493.32	496.73	497.40	497.29	497.11	496.97	496.65	.....
23	494.23	493.18	492.25	491.89	493.42	496.78	.....	497.26	497.09	496.95	496.64	.....
24	494.19	493.15	492.21	491.94	493.51	496.85	497.37	497.32	497.09	496.96	496.63	.....
25	494.17	493.13	492.18	491.97	493.61	496.91	497.34	497.28	497.05	497.00	496.62	.....
26	494.15	493.10	492.14	492.00	493.68	496.96	497.35	497.26	497.04	496.97	496.62	.....
27	494.13	493.07	492.10	492.05	493.77	497.04	497.31	497.28	496.99	496.93	496.58	.....
28	494.09	493.04	492.06	492.10	493.87	497.06	497.31	497.23	497.00	496.88	496.57	.....
29	494.06	.....	492.03	492.11	493.97	497.05	497.29	497.28	497.00	496.83	496.57	.....
30	494.04	.....	492.00	492.12	494.11	497.06	497.26	497.31	496.98	496.85	496.62	.....
31	494.02	.....	491.96	.....	494.22	.....	497.20	497.45	.....	496.83	.....	.....
1914												
1	.....	495.00	494.18	492.97	492.70	494.50	496.65	497.20	496.60	496.60	496.50	495.45
2	.....	495.11	494.10	492.93	492.75	494.53	496.73	497.20	496.50	496.55	496.40	495.45
3	.....	494.80	494.06	492.90	492.90	494.70	496.73	497.20	496.50	496.60	496.30	495.45
4	.....	494.91	494.04	492.87	492.88	494.65	496.87	497.15	496.50	496.60	496.25	495.40
5	.....	494.85	493.98	492.92	492.90	494.68	496.97	497.00	496.60	496.60	496.30	495.40
6	495.45	494.85	493.97	492.80	492.95	494.70	496.90	497.00	496.65	496.60	496.25	495.40
7	495.44	494.84	493.90	492.76	493.00	494.75	496.97	497.00	496.65	496.60	496.20	495.40
8	495.44	494.86	493.97	492.74	493.05	494.80	496.98	497.10	496.55	496.60	496.25	495.30
9	495.81	494.82	493.86	492.67	493.07	494.95	497.00	497.20	496.50	496.60	496.20	495.25
10	495.40	494.72	493.86	492.63	493.17	495.10	497.00	497.10	496.50	496.60	496.10	495.20
11	495.68	494.72	493.77	492.55	493.18	495.20	497.20	497.10	496.50	496.60	496.10	495.20
12	495.73	494.70	493.72	492.62	493.20	495.25	497.30	497.00	496.45	496.65	496.10	495.10
13	495.68	494.65	493.68	492.50	493.25	495.30	497.25	496.95	496.50	496.60	496.05	495.10
14	495.65	494.60	493.65	492.48	493.27	495.40	497.30	496.90	496.50	496.65	496.00	495.05
15	495.62	494.64	493.68	492.44	493.28	495.50	497.30	497.00	496.50	496.60	496.05	495.00
16	495.60	494.56	493.63	492.47	493.30	495.55	497.20	497.50	496.45	496.60	495.90	495.00
17	495.58	494.52	493.57	492.50	493.30	495.60	497.30	496.90	496.45	496.60	495.90	495.00
18	495.55	494.42	493.51	492.60	493.33	495.70	497.35	496.95	496.50	496.65	495.90	494.90
19	495.53	494.46	493.45	492.67	493.40	495.75	497.30	496.90	496.50	496.60	495.85	494.90
20	495.50	494.46	493.42	492.55	493.65	495.80	497.40	496.85	496.60	496.50	495.80	494.90
21	495.48	494.36	493.36	492.55	493.75	495.90	497.40	496.85	496.50	496.50	495.70	494.85
22	495.47	494.41	493.38	492.59	493.77	495.90	497.35	496.85	496.50	496.50	495.85	494.85
23	495.44	494.35	493.30	492.60	493.80	496.00	497.30	496.95	496.60	496.60	495.75	494.85
24	495.40	494.30	493.25	492.60	494.00	496.07	497.30	496.80	496.60	496.60	495.65	494.88
25	495.18	494.26	493.27	492.60	494.00	496.13	497.30	496.80	496.60	496.60	495.65	494.90
26	495.18	494.24	493.22	492.68	494.10	496.20	497.35	496.80	496.60	496.45	495.75	494.90
27	495.17	494.20	493.19	492.64	494.20	496.35	497.35	496.80	496.60	496.40	495.55	494.85
28	495.16	494.15	493.14	492.68	494.30	496.43	497.30	496.70	496.60	496.40	495.65	494.70
29	495.16	.....	493.17	492.67	494.35	496.45	497.20	496.70	496.60	496.40	495.70	494.70
30	495.10	.....	493.07	492.67	494.40	496.55	497.27	496.70	496.60	496.40	495.00	494.65
31	495.09	.....	493.02	.....	494.50	.....	497.20	496.65	.....	496.40	.....	494.60

* For 1915 records see page 310.

*TABLE 32

WATER LEVELS—RAINY LAKE—KETTLE FALLS

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. Datum]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1913												
1	.....	.....	.....	491.76	492.04	494.64	497.34	497.36	497.14	496.74	.....	495.58
2	.....	.....	.....	491 74	492.14	494.74	497.14	497.34	497.14	496.74	.....	495.58
3	.....	.....	.....	491.72	492.16	494.74	497.34	497.29	497.04	496.74	.....	495.58
4	.....	.....	.....	491.71	492.22	494.84	497.34	497.29	497.04	496.74	.....	495.59
5	.....	.....	.....	491 69	492.32	494.94	497.34	497.29	497.04	496.89	.....	495.58
6	.....	.....	.....	491.64	492.32	495.04	497.34	497.29	497.04	496.74	496.50	495.59
7	.....	.....	.....	491.64	492.34	495.14	497.34	497.24	497.24	496.79	496.50	496.00
8	.....	.....	.....	491.62	492.44	495.24	497.64	497.29	497.09	496.74	496.52	495.58
9	.....	.....	.....	491.44	492.46	495.44	497.44	497.29	497.04	496.84	496.52	495.58
10	.....	.....	.....	491.39	492.46	495.54	497.49	497.24	497.04	496.96	496.51	495.58
11	.....	.....	.....	491.34	492.48	495.64	497.44	497.19	497.09	497.02	496.49	495.57
12	.....	.....	.....	491.34	492.64	.....	497.44	497.19	496.94	496.99	496.51	495.57
13	.....	.....	.....	491.39	492.64	.....	497.49	497.14	496.92	496.84	496.51	495.57
14	.....	.....	.....	491.39	492.64	496.14	497.42	497.14	496.84	.....	496.50	495.56
15	.....	.....	.....	491.42	492.69	496.24	497.44	497.24	496.94	.....	496.59	495.56
16	.....	.....	.....	491.46	492.74	496.44	497.44	497.24	496.99	.....	495.59	495.56
17	.....	.....	.....	491.49	492.84	496.54	497.54	497.14	496.99	.....	495.59	495.56
18	.....	.....	.....	491.54	492.94	496.64	497.54	497.04	496.84	.....	495.59	495.56
19	.....	.....	.....	491.54	492.99	496.64	497.54	497.04	497.09	.....	495.50	495.56
20	.....	.....	.....	491.54	493.14	496.74	497.52	497.09	497.14	.....	495.58	495.56
21	.....	.....	.....	491.64	493.24	496.74	497.52	497.24	496.99	.....	495.59	495.55
22	.....	.....	.....	491.74	493.34	496.74	497.59	497.24	496.74	.....	495.59	495.53
23	.....	.....	.....	491.79	493.46	496.84	497.54	497.19	496.74	.....	495.59	495.53
24	.....	.....	.....	491.84	493.49	496.84	497.44	497.19	496.79	.....	495.59	495.53
25	.....	.....	.....	491.94	493.54	496.88	497.54	497.24	496.74	.....	495.59	495.53
26	.....	.....	.....	491.96	493.64	496.90	497.44	497.14	496.74	.....	495.58	495.53
27	.....	.....	.....	491.96	493.74	496.92	497.34	497.24	496.72	.....	495.58	495.53
28	.....	.....	.....	492.04	493.84	496.94	497.34	497.14	496.69	.....	495.58	495.53
29	.....	.....	.....	492.04	494.04	497.14	497.24	497.04	496.69	.....	495.58	495.53
30	.....	.....	.....	492.06	494.24	497.28	497.34	496.99	496.74	.....	495.58	495.51
31	.....	.....	.....	.....	494.44	.....	497.34	496.99	.....	.....	.....	495.51
1914												
1	495.51	494.53	494.51	492.59	492.90	494.80	496.90	497.48	497.10	496.90	496.66	495.75
2	495.51	494.53	494.51	492.59	492.90	494.75	496.93	497.49	497.05	496.89	496.40	495.75
3	495.51	494.53	494.51	492.59	493.00	494.85	496.93	497.46	497.28	496.88	496.60	495.55
4	495.51	494.53	493.58	492.59	493.10	494.80	497.00	497.46	496.93	496.85	496.75	495.60
5	495.51	494.52	493.58	492.57	493.10	494.80	497.07	497.41	496.87	496.90	496.50	495.55
6	495.51	494.52	493.58	492.57	493.10	494.85	497.10	497.73	496.88	496.97	496.30	495.55
7	495.51	494.52	493.58	492.56	493.20	494.95	497.35	497.41	496.90	496.93	496.65	495.55
8	.....	494.52	493.58	492.56	493.20	494.99	497.20	497.30	496.88	496.90	496.35	495.55
9	.....	494.52	493.58	492.55	493.20	495.25	497.20	497.50	496.80	496.80	496.40	495.50
10	.....	494.52	493.58	492.55	493.30	495.40	497.25	497.57	496.85	496.90	496.40	495.45
11	.....	.....	493.58	492.54	493.30	495.40	497.27	497.45	496.85	497.00	496.30	495.40
12	.....	.....	493.58	492.54	493.40	495.53	497.30	497.40	496.77	496.95	496.20	495.30
13	.....	.....	493.56	492.54	493.40	495.53	497.47	497.44	496.85	496.95	496.30	495.35
14	.....	.....	493.56	492.54	493.50	495.62	497.51	497.45	496.82	496.95	496.05	495.35
15	.....	.....	493.56	492.54	493.50	495.68	497.51	497.35	496.80	496.95	496.30	495.30
16	.....	.....	493.56	492.54	493.50	495.77	497.60	497.34	496.73	496.90	496.45	495.25
17	.....	.....	493.55	492.54	493.50	495.83	497.83	497.34	496.80	496.90	496.25	495.20
18	.....	.....	493.55	492.53	493.50	495.95	497.67	497.30	496.75	496.80	496.25	495.15
19	.....	.....	493.53	492.53	493.60	495.95	497.67	497.28	496.82	496.87	496.10	495.10
20	.....	.....	493.53	492.53	493.70	495.98	497.70	497.27	496.82	496.90	496.05	495.05
21	.....	.....	493.53	492.53	493.85	496.08	497.70	497.26	496.85	496.90	496.20	495.05
22	.....	.....	493.53	492.53	493.90	396.13	497.70	497.20	497.13	496.80	496.00	495.05
23	.....	.....	493.53	492.53	493.95	496.27	497.70	497.26	496.95	496.85	495.87	495.00
24	.....	.....	493.53	492.53	493.95	496.33	497.70	497.17	497.05	496.95	496.00	495.00
25	.....	.....	493.53	492.53	494.20	496.42	497.70	497.09	496.97	496.95	495.87	494.95
26	494.53	.....	493.53	492.53	494.35	496.40	497.67	497.16	496.97	497.00	495.95	494.90
27	494.53	.....	493.51	492.54	494.25	496.30	497.63	497.15	496.95	496.90	495.75	494.95
28	494.53	.....	493.51	492.54	494.25	496.50	497.50	497.08	496.95	496.90	495.70	494.95
29	494.53	.....	493.51	492.54	494.50	496.55	497.50	497.04	497.03	496.90	495.70	494.95
30	494.53	.....	493.51	492.54	494.60	496.60	497.54	497.09	496.97	496.80	495.75	494.85
31	494.53	.....	493.51	.....	494.80	.....	497.58	496.97	.....	496.70	.....	494.80

* For 1915 records see page 311.

TABLE 33

WATER LEVELS—RAINY RIVER—FORT FRANCES, ONTARIO, UPPER (D. P. W.) POWER HOUSE GAUGE

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. Datum.]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1911												
1	.....	.....	.....	.....	.....	.....	.....	.....	493.17	492.89	492.54	492.04
2	.....	.....	.....	.....	.....	.....	.....	.....	493.12	492.89	492.37	492.03
3	.....	.....	.....	.....	.....	.....	.....	.....	493.08	492.92	492.44	492.19
4	.....	.....	.....	.....	.....	.....	.....	.....	493.16	492.80	492.51	492.02
5	.....	.....	.....	.....	.....	.....	.....	.....	493.17	492.82	492.48	492.00
6	.....	.....	.....	.....	.....	.....	.....	.....	493.13	492.82	492.42	491.97
7	.....	.....	.....	.....	.....	.....	.....	.....	493.04	492.83	492.34	491.96
8	.....	.....	.....	.....	.....	.....	.....	.....	492.98	492.86	492.45	491.91
9	.....	.....	.....	.....	.....	.....	.....	.....	493.01	492.87	492.41	491.86
10	.....	.....	.....	.....	.....	.....	.....	.....	493.02	492.88	492.23	492.09
11	.....	.....	.....	.....	.....	.....	.....	.....	493.00	492.80	492.50	491.87
12	.....	.....	.....	.....	.....	.....	.....	.....	492.98	492.81	492.25	491.86
13	.....	.....	.....	.....	.....	.....	.....	.....	492.98	492.80	492.35	491.86
14	.....	.....	.....	.....	.....	.....	.....	493.26	492.92	492.81	492.33	491.86
15	.....	.....	.....	.....	.....	.....	.....	493.22	492.84	492.86	492.31	491.83
16	.....	.....	.....	.....	.....	.....	.....	493.22	492.94	492.88	492.29	491.80
17	.....	.....	.....	.....	.....	.....	.....	493.22	493.02	492.78	492.27	491.98
18	.....	.....	.....	.....	.....	.....	.....	493.13	492.79	492.79	492.22	491.84
19	.....	.....	.....	.....	.....	.....	.....	493.16	492.90	492.72	492.55	491.77
20	.....	.....	.....	.....	.....	.....	.....	493.37	492.86	492.69	492.26	491.73
21	.....	.....	.....	.....	.....	.....	.....	493.20	492.86	492.70	492.24	491.72
22	.....	.....	.....	.....	.....	.....	.....	493.15	492.93	492.79	492.22	491.70
23	.....	.....	.....	.....	.....	.....	.....	493.10	492.89	492.69	492.17	491.69
24	.....	.....	.....	.....	.....	.....	.....	493.05	492.97	492.68	492.17	491.95
25	.....	.....	.....	.....	.....	.....	.....	493.05	492.87	492.63	492.10	491.70
26	.....	.....	.....	.....	.....	.....	.....	493.15	492.88	492.60	492.28	491.66
27	.....	.....	.....	.....	.....	.....	.....	493.31	492.84	492.54	492.20	491.54
28	.....	.....	.....	.....	.....	.....	.....	493.20	492.87	492.46	492.11	491.50
29	.....	.....	.....	.....	.....	.....	.....	493.17	492.81	492.64	492.09	491.49
30	.....	.....	.....	.....	.....	.....	.....	493.20	492.81	492.62	492.05	491.46
31	.....	.....	.....	.....	.....	.....	.....	493.16	.....	492.59	.....	491.71
1912												
1	491.66	490.68	489.93	488.87	489.25	492.34	495.08	495.77	495.98	495.91	495.64	495.07
2	491.49	490.52	489.90	488.71	489.35	492.61	495.12	495.74	495.94	495.89	495.64	495.07
3	491.46	490.51	490.24	488.68	489.44	492.36	495.18	495.71	495.93	495.88	495.69	495.06
4	491.43	490.90	489.86	488.66	489.47	492.63	495.26	495.80	495.88	495.90	495.62	495.02
5	491.41	490.56	489.79	488.75	490.20	492.71	495.29	495.75	495.84	495.90	495.65	494.90
6	491.40	490.53	489.76	488.75	489.78	492.87	495.30	495.76	495.71	495.89	495.56	494.94
7	491.65	490.49	489.67	489.05	489.63	492.96	495.43	495.74	495.71	495.82	495.52	494.94
8	491.44	490.48	489.66	489.22	489.74	493.10	495.43	495.76	495.96	495.90	495.40	494.95
9	491.28	490.49	489.65	488.48	489.84	493.26	495.39	495.74	495.88	495.90	495.56	494.90
10	491.27	490.54	489.99	488.44	489.95	493.27	495.42	495.71	495.87	495.90	495.58	494.85
11	491.21	490.77	489.62	488.45	490.06	493.42	495.46	495.76	495.80	495.91	495.57	494.77
12	491.11	490.41	489.53	488.49	490.75	493.51	495.48	495.70	495.83	495.87	495.56	494.80
13	491.06	490.44	489.49	488.59	490.32	493.65	495.53	495.71	495.85	495.91	495.51	494.78
14	491.60	490.38	489.46	489.24	490.36	493.76	495.65	495.75	495.82	495.85	495.46	494.85
15	491.16	490.32	489.46	488.73	490.47	493.85	495.57	495.76	495.92	495.89	495.43	494.79
16	491.08	490.32	489.38	488.65	490.59	493.94	495.53	495.82	495.86	495.85	495.36	494.77
17	491.01	490.32	489.77	488.72	490.80	493.95	495.52	495.83	495.82	495.87	495.41	494.78
18	490.97	490.55	489.46	488.74	490.90	494.06	495.63	495.82	495.81	495.78	495.36	494.69
19	490.95	490.28	489.42	488.74	491.32	494.17	495.68	495.77	495.82	495.80	495.34	494.64
20	490.91	490.24	489.25	488.74	491.05	494.25	495.68	495.75	495.84	495.85	495.30	494.61
21	491.28	490.17	489.19	489.41	491.16	494.31	495.71	495.69	495.83	495.82	495.23	494.55
22	490.87	490.19	489.17	488.93	491.30	494.35	495.76	495.77	495.74	495.77	495.19	494.62
23	490.77	490.15	489.14	488.84	491.25	494.48	495.76	495.83	495.83	495.78	495.22	494.58
24	490.77	490.14	489.65	488.85	491.33	494.57	495.66	495.81	495.90	495.75	495.29	494.56
25	490.77	490.41	489.11	488.66	491.49	494.58	495.71	495.90	495.80	495.72	495.20	494.65
26	490.74	490.11	489.02	488.70	491.99	494.68	495.74	495.82	495.74	495.72	495.18	494.65
27	490.78	490.10	488.95	488.75	491.82	494.72	495.73	495.87	495.87	495.77	495.15	494.51
28	491.08	489.99	488.89	489.67	492.02	494.73	495.82	495.92	495.90	495.81	495.10	494.48
29	490.80	489.95	488.85	489.15	491.99	494.90	495.74	495.91	495.89	495.71	495.06	494.52
30	490.77	.....	488.92	489.09	492.29	495.07	495.76	495.91	495.88	495.67	495.15	494.48
31	490.71	.....	489.36	.....	492.19	.....	495.76	495.94	.....	495.67	.....	494.36

* TABLE 33—Continued

WATER LEVELS—RAINY RIVER—FORT FRANCES, ONTARIO, UPPER (D. P. W.) POWER HOUSE GAUGE

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. Datum]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1913												
1	494.36	493.35	492.25	491.02	491.19	494.00	496.56	496.84	496.91	496.45	496.28	496.10
2	494.33	493.53	492.42	491.12	491.26	494.01	496.55	496.75	496.85	496.45	496.27	496.05
3	494.27	493.36	492.11	491.14	491.31	494.10	496.36	496.90	496.85	496.45	496.26	496.04
4	494.25	493.18	492.12	490.92	491.55	494.23	496.77	496.77	496.85	496.43	496.30	496.04
5	494.34	493.16	492.01	490.98	491.47	494.48	496.64	496.76	496.84	496.42	496.28	496.06
6	494.22	493.15	492.02	491.19	491.55	494.73	496.67	496.77	496.81	496.46	496.28	495.98
7	494.21	493.09	492.02	490.98	491.61	494.82	496.75	496.81	496.83	496.47	496.29	496.04
8	494.16	493.04	491.90	490.75	491.74	494.98	496.75	496.73	496.81	496.51	496.27	495.97
9	494.12	493.19	492.17	490.70	491.71	495.04	496.84	496.80	496.79	496.55	496.22	495.95
10	494.07	493.02	491.83	490.66	491.72	495.10	496.65	496.81	496.79	496.53	496.22	495.95
11	494.06	492.97	491.82	490.66	491.80	495.25	496.76	496.84	496.74	496.49	496.23	495.92
12	494.11	492.88	491.75	490.64	491.75	495.35	496.78	496.75	496.67	496.46	496.20	495.89
13	493.99	492.87	491.73	491.03	491.92	495.52	496.75	496.78	496.75	496.42	496.18	495.88
14	493.99	492.82	491.70	490.71	492.00	495.67	496.70	496.88	496.74	496.39	496.16	495.92
15	493.94	492.77	491.69	490.70	492.05	495.80	496.65	496.96	496.69	496.39	496.16	495.88
16	493.92	493.04	491.93	490.72	492.15	495.87	496.70	496.84	496.72	496.36	496.21	495.83
17	493.85	492.83	491.63	490.77	492.20	495.92	496.71	496.84	496.65	496.32	496.22	495.86
18	493.84	492.75	491.55	490.78	492.38	496.00	496.68	496.85	496.65	496.30	496.21	495.77
19	493.89	492.68	491.51	490.85	492.45	496.06	496.71	496.81	496.60	496.31	496.22	495.76
20	493.77	492.63	491.45	491.34	492.62	496.15	496.78	496.77	496.65	496.30	496.21	495.77
21	493.75	492.59	491.42	490.92	492.64	496.24	496.55	496.75	496.69	496.26	496.14	495.79
22	493.73	492.49	491.41	490.95	492.70	496.30	496.75	496.75	496.59	496.28	496.15	495.77
23	493.65	492.77	491.72	490.89	492.83	496.23	496.75	496.76	496.55	496.26	496.08	495.75
24	493.65	492.52	491.38	490.98	492.85	496.36	496.70	496.74	496.55	496.31	496.13	495.74
25	493.71	492.41	491.27	491.02	493.17	496.35	496.73	496.76	496.53	496.34	496.13	495.76
26	493.73	492.44	491.24	491.10	493.06	496.43	496.74	496.79	496.52	496.32	496.16	495.73
27	493.56	492.31	491.22	491.49	493.16	496.57	496.76	496.75	496.47	496.33	496.10	495.70
28	493.52	492.31	491.15	491.20	493.36	496.57	496.75	496.70	496.46	496.34	496.12	495.76
29	493.47	.....	491.10	491.22	493.56	496.56	496.65	496.79	496.44	496.30	496.10	495.66
30	493.45	.....	491.28	491.20	493.66	496.44	496.67	496.83	496.46	496.27	496.16	495.65
31	493.37	.....	491.07	.....	493.76	.....	496.75	496.97	.....	496.26	.....	495.62
1914												
1	495.59	494.81	494.00	492.72	492.37	494.22	496.40	496.90	496.30	496.20	496.30	495.05
2	495.50	494.81	493.87	492.70	492.35	494.20	496.40	497.00	496.30	496.20	496.15	495.00
3	495.51	494.75	493.84	492.64	492.45	494.30	496.50	496.80	496.25	496.25	495.90	495.00
4	495.55	494.73	493.84	492.62	492.55	494.37	496.65	496.80	496.20	496.37	495.90	495.00
5	495.51	494.65	493.77	492.70	492.65	494.40	496.77	496.80	496.20	496.35	495.90	495.00
6	495.41	494.65	493.76	492.53	492.67	494.40	496.67	496.70	496.35	496.25	495.80	495.25
7	495.41	494.64	493.69	492.47	492.75	494.60	496.67	496.75	496.50	496.20	495.70	495.10
8	495.41	494.60	4 3.75	492.45	492.75	494.50	496.75	496.67	496.20	496.20	495.95	494.90
9	495.35	494.53	493.65	492.37	492.75	494.60	496.70	496.85	496.20	496.20	495.85	494.90
10	495.32	494.52	493.58	492.34	492.90	494.70	496.75	496.85	496.10	496.20	495.80	494.90
11	495.38	494.45	493.55	492.26	492.85	494.90	496.87	496.80	496.15	496.35	495.75	494.80
12	495.40	494.45	493.45	492.24	492.85	494.95	497.05	496.80	496.10	496.37	495.70	494.80
13	495.26	494.37	493.45	492.23	492.87	495.00	496.97	496.65	496.25	496.20	495.70	495.05
14	495.24	494.34	493.40	492.15	492.92	495.20	496.97	496.60	496.20	496.25	495.70	494.87
15	495.19	494.45	493.45	492.15	493.00	495.20	497.05	496.70	496.15	496.20	495.80	494.70
16	495.16	494.35	493.34	492.16	493.00	495.14	496.95	496.80	496.10	496.20	495.55	494.60
17	495.15	494.30	493.31	492.19	493.05	495.20	497.05	496.80	496.10	496.20	495.50	494.60
18	495.22	494.25	493.23	492.24	493.05	495.40	497.05	496.70	496.25	496.45	495.50	494.55
19	495.12	494.24	493.20	492.46	493.10	495.40	497.25	496.60	496.20	496.20	495.45	494.50
20	495.11	494.20	493.15	492.28	493.30	495.45	497.15	496.50	496.25	496.20	495.40	494.70
21	495.05	494.14	493.14	492.23	493.40	495.70	497.15	496.50	496.17	496.20	495.30	494.60
22	495.02	494.27	493.25	492.25	493.55	495.65	497.00	496.60	496.15	496.20	495.50	494.50
23	494.99	494.10	493.04	492.29	493.65	495.65	497.00	496.60	496.20	496.25	495.50	494.40
24	494.98	494.05	493.01	492.30	493.80	495.68	497.00	496.50	496.20	496.20	495.35	494.40
25	495.01	494.02	493.02	492.40	493.70	495.80	497.00	496.50	496.20	496.50	495.30	494.70
26	494.98	494.00	492.98	492.45	493.75	495.95	497.10	496.50	496.15	496.35	495.20	494.90
27	494.88	493.97	492.95	492.27	493.90	496.15	497.00	496.40	496.35	496.10	495.20	494.60
28	494.94	493.87	492.90	492.37	493.95	496.20	497.00	496.40	496.25	496.00	495.30	494.40
29	494.85	.....	493.00	492.37	493.95	496.22	496.95	496.40	496.20	495.90	495.45	494.30
30	494.82	.....	492.84	492.35	493.95	496.30	496.95	496.50	496.20	496.00	495.15	494.30
31	494.78	.....	492.74	.....	494.15	.....	496.95	496.50	.....	496.10	.....	494.25

* For 1915 records see page 311.

TABLE 34

WATER LEVELS—RAINY RIVER—FORT FRANCES, ONTARIO, LOWER (M. & O.) GAUGE

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. Datum]

Day	Jan.	Feb	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1911												
1	.....	.....	.....	.....	.....	.....	.....	.....	463.67	462.47	462.51	464.21
2	.....	.....	.....	.....	.....	.....	.....	.....	463.66	462.98	462.50	464.22
3	.....	.....	.....	.....	.....	.....	.....	.....	463.57	462.69	462.44	463.59
4	.....	.....	.....	.....	.....	.....	.....	.....	463.24	462.82	462.16	464.72
5	.....	.....	.....	.....	.....	.....	.....	.....	463.35	462.87	461.64	464.06
6	.....	.....	.....	.....	.....	.....	.....	.....	463.61	462.87	462.04	464.01
7	.....	.....	.....	.....	.....	.....	.....	.....	463.51	462.64	462.35	463.87
8	.....	.....	.....	.....	.....	.....	.....	.....	463.60	462.32	462.29	463.89
9	.....	.....	.....	.....	.....	.....	.....	.....	463.40	462.14	462.36	463.99
10	.....	.....	.....	.....	.....	.....	.....	.....	463.15	462.35	462.60	463.27
11	.....	.....	.....	.....	.....	.....	.....	.....	463.37	462.79	462.18	463.17
12	.....	.....	.....	.....	.....	.....	.....	.....	463.37	462.82	.....	463.55
13	.....	.....	.....	.....	.....	.....	.....	.....	463.35	462.85	463.77	463.55
14	.....	.....	.....	.....	.....	.....	.....	462.88	463.33	462.56	463.99	463.52
15	.....	.....	.....	.....	.....	.....	.....	463.60	463.43	461.90	464.11	463.49
16	.....	.....	.....	.....	.....	.....	.....	463.70	463.17	461.91	464.17	463.46
17	.....	.....	.....	.....	.....	.....	.....	463.72	462.29	462.51	464.17	462.84
18	.....	.....	.....	.....	.....	.....	.....	463.75	462.25	462.62	464.20	462.53
19	.....	.....	.....	.....	.....	.....	.....	463.53	463.01	462.84	462.28	463.36
20	.....	.....	.....	.....	.....	.....	.....	462.15	463.10	463.02	463.36	463.47
21	.....	.....	.....	.....	.....	.....	.....	462.97	462.95	462.67	464.15	463.44
22	.....	.....	.....	.....	.....	.....	.....	463.67	462.93	462.05	464.27	463.39
23	.....	.....	.....	.....	.....	.....	.....	463.77	462.99	462.07	464.25	463.59
24	.....	.....	.....	.....	.....	.....	.....	463.81	462.29	462.17	464.37	461.90
25	.....	.....	.....	.....	.....	.....	.....	463.72	462.21	462.73	464.66	460.99
26	.....	.....	.....	.....	.....	.....	.....	463.70	462.58	462.83	463.75	463.16
27	.....	.....	.....	.....	.....	.....	.....	462.80	462.56	462.89	463.11	464.35
28	.....	.....	.....	.....	.....	.....	.....	463.12	462.85	462.75	464.06	464.56
29	.....	.....	.....	.....	.....	.....	.....	463.58	462.90	462.11	464.17	464.65
30	.....	.....	.....	.....	.....	.....	.....	463.68	462.98	461.88	464.20	464.46
31	.....	.....	.....	.....	.....	.....	.....	463.65	.....	462.37	.....	463.55
1912												
1	463.40	464.10	464.19	462.42	463.86	463.59	462.66	465.56	463.15	463.86	463.87	463.48
2	464.02	464.65	464.13	462.78	463.85	462.95	462.93	465.57	462.95	463.71	463.83	464.68
3	464.30	464.87	463.33	462.77	463.82	463.23	463.05	465.61	463.67	463.75	463.26	464.83
4	464.42	463.62	463.42	462.68	463.91	463.45	462.69	465.07	464.36	464.07	462.91	464.93
5	464.50	463.79	463.93	462.75	463.23	463.45	462.60	465.10	.....	464.07	463.76	464.81
6	464.65	464.25	463.94	.....	463.60	463.38	462.94	465.20	464.80	463.68	463.89	464.90
7	463.46	464.39	463.91	461.85	464.43	463.45	462.43	465.32	464.45	463.84	463.87	464.60
8	463.50	464.40	464.05	462.10	464.74	463.37	463.08	465.32	464.30	463.85	463.94	464.39
9	464.53	464.37	464.05	462.76	464.82	462.98	463.49	465.21	464.44	463.89	463.75	464.67
10	464.68	464.20	463.32	462.92	464.91	463.29	463.70	465.20	464.63	463.98	463.26	465.22
11	464.80	463.36	463.20	462.92	464.83	463.33	464.13	465.10	464.52	463.96	463.50	465.41
12	465.04	463.82	463.65	462.97	463.93	463.32	464.23	464.58	464.44	463.99	463.44	465.54
13	465.15	464.33	463.68	462.95	464.05	463.28	464.32	464.40	464.36	463.55	463.78	465.48
14	462.47	464.24	463.69	462.17	464.64	463.21	463.97	464.51	464.29	463.78	463.86	465.16
15	464.20	464.20	463.74	462.57	464.79	463.20	464.13	464.29	463.58	463.89	463.72	464.53
16	464.71	464.11	463.57	462.93	464.91	462.95	464.63	463.73	463.59	463.88	463.88	464.39
17	464.80	464.06	462.82	462.89	464.62	462.60	464.72	464.00	464.11	463.87	463.99	465.12
18	464.89	463.22	462.84	462.82	464.45	463.09	464.80	463.88	463.93	463.78	463.59	465.31
19	464.90	463.19	463.11	462.84	463.50	463.09	463.65	464.05	463.71	463.84	463.83	465.14
20	464.94	463.76	463.56	462.82	463.79	463.13	464.11	464.51	463.67	463.50	463.84	465.27
21	463.60	463.88	463.62	461.84	464.17	463.26	464.39	464.22	463.36	463.33	463.98	465.13
22	464.04	463.88	463.69	462.24	464.12	463.35	464.55	463.70	463.21	463.72	464.08	464.57
23	464.77	463.91	463.59	462.79	464.18	462.74	464.70	463.49	463.25	463.77	463.90	464.02
24	464.86	463.89	462.55	462.78	464.17	463.10	464.79	465.60	463.59	463.77	463.08	464.39
25	464.79	463.26	462.89	463.00	464.01	463.08	464 78	463.37	464.19	463.77	463.21	464.35
26	464.75	463.49	463.24	463.28	462.69	463.05	464.82	463.4 7	465.20	463.75	463.78	463.56
27	464.56	464.01	463.27	463.41	463.17	462.97	464.80	463.37	464.86	463.09	463.78	464.39
28	463.35	464.11	463.22	462.65	463.66	462.91	464.73	463.60	464.46	462.78	463.88	464.69
29	463.43	464.16	463.05	463.09	463.72	462.93	465.55	463.54	464.05	462.80	463.79	464.14
30	464.08	.....	462.91	463.73	463.19	462.49	465.55	463.76	464.30	462.83	463.74	464.02
31	464.07	.....	462.19	.....	463.63	.....	465.55	463.73	.....	462.86	.....	464.72

These records correspond to the certified copy of April 3rd, 1915, as furnished by the Department of Public Works, Canada, and are platted on the graphs of water levels. The following additional corrections were certified to on May 17th, 1915. (Engrs.)

1911	Dec.	4	463.72	1912 Oct.	28	462.58
				Oct.	30	463.83
1912	June	3	463.43	Oct.	31	463.86
	July	18	464.30	Nov.	17	462.99

* TABLE 34—Continued

WATER LEVELS—RAINY RIVER—FORT FRANCES, ONTARIO, LOWER (M. & O.) GAUGE

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. Datum]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1913												
1	464.82	465.76	465.79	464.43	465.51	464.56	466.91	466.14	462.63	463.42	463.69	463.71
2	464.79	464.51	465.09	464.13	465.25	464.80	466.94	466.20	463.66	463.41	463.33	463.33
3	464.94	464.47	465.24	463.87	465.25	465.76	467.10	465.76	463.78	463.33	463.51	464.47
4	465.11	465.54	465.73	464.03	464.93	465.18	466.30	465.89	463.87	463.15	463.69	464.21
5	464.30	465.67	465.81	463.97	465.15	465.03	466.60	465.68	463.90	463.13	463.70	463.92
6	464.52	465.70	465.87	463.20	464.70	465.15	466.95	465.44	463.87	463.46	463.65	464.12
7	465.10	465.70	465.86	463.18	464.63	465.33	467.13	465.51	463.81	463.86	463.63	464.74
8	465.10	465.70	465.85	463.88	465.56	465.38	467.00	465.90	464.04	464.14	463.68	465.15
9	465.22	465.99	464.85	464.01	465.50	465.75	466.90	465.80	463.93	464.39	462.93	465.77
10	465.30	465.68	465.06	464.00	465.09	465.85	467.68	465.63	463.98	464.58	462.67	465.70
11	465.38	465.64	465.37	464.07	464.56	465.63	467.80	465.28	464.13	464.90	463.08	465.59
12	464.55	465.80	465.27	464.13	464.60	465.30	467.91	465.40	464.03	464.67	463.55	465.42
13	464.93	465.78	465.17	463.35	464.67	465.05	468.20	465.40	464.01	464.51	463.65	465.35
14	465.35	465.83	464.99	463.95	464.53	464.92	468.60	465.40	463.55	464.97	463.60	464.45
15	465.37	465.87	464.95	464.65	464.60	464.39	468.85	465.44	463.87	464.98	463.37	464.61
16	465.37	464.76	464.45	465.73	464.65	464.78	468.70	465.45	464.01	464.72	463.20	464.99
17	465.25	464.87	464.68	465.90	464.70	464.75	468.95	465.27	464.01	464.73	463.38	464.90
18	465.45	465.60	465.09	465.90	464.35	465.75	469.15	465.28	463.96	464.53	463.55	465.03
19	464.70	465.68	465.29	465.91	464.49	464.70	469.10	465.29	463.93	464.49	463.55	464.98
20	464.63	465.75	465.55	465.20	465.50	464.95	468.65	465.40	463.93	464.28	463.50	465.17
21	465.36	465.80	465.50	465.40	465.41	465.28	468.50	465.40	463.45	464.72	463.51	464.56
22	465.50	465.71	465.53	465.39	465.38	465.63	468.25	465.44	463.84	464.58	463.73	464.25
23	465.53	464.86	464.47	465.32	465.40	465.40	468.13	465.50	463.78	464.34	463.53	464.74
24	465.59	465.07	464.64	465.29	465.40	465.43	467.00	464.38	463.71	464.26	463.59	464.79
25	465.33	465.71	465.26	465.48	465.00	465.45	467.90	464.33	463.57	464.23	464.17	464.39
26	464.53	465.86	465 25	465.85	465.05	465.40	.....	464.08	463.47	463.89	464.18	464.11
27	464.50	465.90	465.35	465.60	465.03	465.40	467.50	464.00	463.44	463.84	464.23	464.73
28	465.48	465.82	465.29	465.88	464.85	465.83	467.50	463.98	463.33	463.77	463.23	464.36
29	464.59	.....	465.17	466.00	464.63	466.60	467.60	463.93	463.43	463.81	463.55	464.60
30	464.61	.....	464.18	465.78	464.75	466.83	467.40	463.83	463.46	463.75	463.41	464.85
31	464.77	.....	464.05	.....	464.89	.....	466.54	462.38	.....	463.74	.....	464.98
1914												
1	465.31	464.55	465.10	464.00	465.80	465.37	465.20	465.70	465.50	465.90	465.00	465.75
2	465.32	464.88	465.23	464.00	466.45	465.82	465.05	465.00	465.80	465.90	465.10	466.00
3	465.24	465.40	465.35	464.05	466.57	465.65	465.45	465.05	465.80	465.70	465.95	465.85
4	464.67	465.62	465.30	464.00	467.01	465.52	464.77	465.65	465.80	464.55	466.10	465.80
5	464.76	465.50	465.19	463.31	467.25	465.40	463.55	465.72	465.80	464.30	466.03	465.75
6	465.04	465.75	465.10	463.80	467.35	465.32	464.95	465.70	464.95	465.55	465.90	464.55
7	465.05	465.80	465.08	463.97	467.20	464.62	465.80	465.82	463.10	465.65	466.00	464.20
8	465.00	465.39	464.40	464.00	467.05	464.70	465.80	465.80	463.65	465.72	464.85	465.45
9	464.94	465.00	464.57	464.10	466.75	465.60	465.97	465.05	465.50	465.70	464.85	465.75
10	465.06	465.70	464.90	464.03	466.10	466.75	465.90	464.90	465.60	465.75	465.87	465.95
11	464.61	465.80	465.07	464.20	465.85	467.35	465.82	465.62	465.60	464.50	465.95	466.03
12	464.98	465.88	464.92	463.99	465.95	467.27	465.15	465.70	465.60	464.95	465.90	466.18
13	465.39	465.92	464.85	463.61	465.75	467.12	465.95	465.70	464.85	465.90	465.75	465.40
14	465.32	465.94	464.79	463.92	465.60	466.10	467.55	465.70	464.65	466.10	465.70	465.45
15	465.10	465.33	464.27	464.02	465.40	465.52	467.95	465.70	465.70	465.85	464.60	466.38
16	464.93	465.58	464.39	464.10	465.30	465.92	467.82	464.72	465.80	465.80	464.65	466.58
17	465.05	465.87	464.45	464.30	464.75	465.85	467.50	464.55	465 90	465.85	465.85	466.45
18	464.52	465.85	464.65	464.67	464.80	465.65	467.30	465.55	465.90	464.90	465.95	466.40
19	464.04	465.91	464.61	464.46	465.05	465.55	466.15	465.60	466.00	464.15	466.60	466.40
20	464.74	465.92	464.60	464.95	465.72	465.45	466.35	465.67	465.20	465.90	466.80	465.20
21	465.27	465.82	464.51	465.20	466.90	464.65	466.60	465.70	465.00	465.95	466.90	464.40
22	465.40	465.06	463.90	465.02	466.95	464.55	466.90	465.65	465.85	465.95	466.20	466.25
23	465.34	465.46	464.20	464.98	466.70	465.07	467.15	464.85	465.90	466.10	466.00	466.50
24	465.51	465.67	464.32	464.90	466.07	465.25	466.95	464.70	466.00	466.00	466.70	466.80
25	464.75	465.75	464.15	464.80	465.95	465.25	466.90	465.50	466.00	464.97	466.60	464.10
26	464.09	465.65	464.25	464.70	466.10	465.30	466.60	465.65	466.05	465.20	466.40	462.35
27	464.86	465.62	464.25	464.75	466.97	465.15	466.50	465.70	465.30	465.95	466.05	463.45
28	465.54	465.63	464.25	464.77	466.92	464.45	466.70	465.70	464.80	466.10	465.25	464.85
29	465.85	.....	463.79	465.04	466.25	464.32	466.70	465.70	465.75	466.20	464.60	466.10
30	465.80	.....	463.80	465.50	466.30	465.25	466.30	464.80	465.85	466.10	464.05	466.85
31	465.50	.....	464.00	.....	465.57	.....	466.00	464.65	.....	466.00	.....	466.80

* For 1915 records see page 312.

These records correspond to the certified copy of April 3rd, 1915, as furnished by the Department of Public Works, Canada, and are platted on the graphs of water levels. The following additional corrections were certified to on May 17th, 1915. (Engrs.)

1913 Feb. 9	464.99	1913 May 5	464.15	1914 May 27	465.97	1914 Oct. 19	464.65
April 20	465.05	Nov. 30	463.61	May 28	465.92	Dec. 28	464.95

TABLE 35

WATER LEVELS—RAINY RIVER—INTERNATIONAL FALLS, MINN., U. S. G. S. GAUGE ON DOCK

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. Datum]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1911												
1	.....	.....	.....	.....	.....	.....	.....	.....	463.45	462.25	462.30	464.09
2	.....	.....	.....	.....	.....	.....	.....	.....	463.42	461.74	462.28	464.06
3	.....	.....	.....	.....	.....	.....	.....	.....	463.35	462.47	462.25	463.44
4	.....	.....	.....	.....	.....	.....	.....	.....	463.14	462.81	461.93	463.57
5	.....	.....	.....	.....	.....	.....	.....	.....	463.21	462.65	461.41	463.89
6	.....	.....	.....	.....	.....	.....	.....	.....	463.38	462.65	461.84	463.83
7	.....	.....	.....	.....	.....	.....	.....	.....	463.30	462.47	462.13	463.70
8	.....	.....	.....	.....	.....	.....	.....	.....	463.39	462.11	462.06	463.72
9	.....	.....	.....	.....	.....	.....	.....	.....	463.22	461.91	462.16	463.85
10	.....	.....	.....	.....	.....	.....	.....	.....	463.07	462.14	462.38	463.07
11	.....	.....	.....	.....	.....	.....	.....	.....	463.17	462.57	461.99	463.00
12	.....	.....	.....	.....	.....	.....	.....	.....	463.16	462.62	462.96	463.37
13	.....	.....	.....	.....	.....	.....	.....	.....	463.13	462.65	463.55	463.37
14	.....	.....	.....	.....	.....	.....	.....	462.75	463.12	462.36	463.84	463.35
15	.....	.....	.....	.....	.....	.....	.....	463.56	463.22	461.68	463.97	463.32
16	.....	.....	.....	.....	.....	.....	.....	463.53	462.96	461.72	464.02	463.30
17	.....	.....	.....	.....	.....	.....	.....	463.47	462.12	462.29	464.01	462.65
18	.....	.....	.....	.....	.....	.....	.....	463.64	462.07	.....	464.01	462.37
19	.....	.....	.....	.....	.....	.....	.....	463.51	462.78	462.63	462.19	463.20
20	.....	.....	.....	.....	.....	.....	.....	462.04	462.97	462.82	463.20	463.28
21	.....	.....	.....	.....	.....	.....	.....	462.73	462.81	462.47	463.99	463.26
22	.....	.....	.....	.....	.....	.....	.....	463.51	462.74	461.85	464.09	.....
23	.....	.....	.....	.....	.....	.....	.....	463.59	462.76	461.84	464.10	.....
24	.....	.....	.....	.....	.....	.....	.....	463.71	462.02	461.93	464.22	461.71
25	.....	.....	.....	.....	.....	.....	.....	463.58	461.99	462.51	464.50	460.86
26	.....	.....	.....	.....	.....	.....	.....	463.56	462.36	462.61	463.56	462.61
27	.....	.....	.....	.....	.....	.....	.....	462.64	462.35	462.60	462.94	464.13
28	.....	.....	.....	.....	.....	.....	.....	462.87	462.64	462.53	463.92	464.41
29	.....	.....	.....	.....	.....	.....	.....	463.54	462.63	461.87	464.02	464.46
30	.....	.....	.....	.....	.....	.....	.....	463.44	462.68	461.70	464.05	464.23
31	.....	.....	.....	.....	.....	.....	.....	463.46	.....	462.15	.....	463.31
1912												
1	462.48	463.97	463.88	462.17	463.67	463.38	462.42	465.41	462.95	463.67	463.67	463.28
2	463.81	464.46	463.93	462.54	463.63	462.51	462.78	465.43	462.76	463.54	463.62	464.48
3	464.11	464.68	463.18	462.55	463.61	463.30	462.91	465.49	463.46	463.57	463.06	464.63
4	464.21	463.30	463.26	462.46	463.74	462.21	462.77	464.91	464.24	463.90	462.72	464.74
5	464.16	463.64	463.75	462.43	463.05	463.34	462.65	464.94	464.39	463.88	463.56	464.62
6	464.21	464.13	463.76	462.36	463.41	463.22	462.63	465.04	464.63	463.48	463.69	464.72
7	.....	464.25	463.72	461.31	464.23	463.21	461.99	465.20	464.25	463.65	463.66	464.44
8	463.34	464.24	463.87	461.71	464.53	463.08	462.90	465.10	464.22	463.56	463.73	464.18
9	464.37	464.19	463.87	462.57	464.55	462.81	463.35	465.05	464.28	463.72	463.54	464.49
10	464.52	464.05	463.15	462.72	464.71	463.02	463.57	465.02	464.45	463.80	463.05	465.02
11	464.64	463.09	463.62	462.71	464.61	463.10	464.00	464.92	464.43	463.76	463.31	465.14
12	464.86	463.51	463.48	462.71	463.75	463.09	463.96	464.91	464.29	463.80	463.25	465.35
13	464.98	463.16	463.48	462.71	463.86	463.04	464.16	464.28	464.20	463.36	463.59	465.27
14	461.93	463.12	463.48	461.71	464.43	463.02	463.63	464.37	464.14	463.58	463.66	464.96
15	464.02	464.01	463.53	462.31	464.55	463.01	464.56	464.11	463.48	463.70	463.52	464.32
16	464.53	463.93	463.38	462.72	464.68	462.50	464.43	463.61	463.42	463.69	463.68	464.19
17	464.63	463.78	462.57	462.68	464.44	462.87	464.57	463.65	463.94	463.65	463.49	464.92
18	464.70	462.97	462.63	462.61	464.27	462.89	464.17	463.70	463.64	463.59	463.41	465.11
19	464.72	462.95	462.86	462.60	463.31	462.90	463.50	463.86	463.44	463.64	463.63	464.94
20	464.75	463.49	463.36	462.58	463.58	462.96	464.47	464.28	463.47	463.28	463.65	465.06
21	463.32	463.61	463.42	461.62	463.93	463.08	464.18	464.13	463.20	462.85	463.78	464.93
22	463.89	463.65	463.49	462.02	463.96	463.11	464.44	463.55	463.00	463.51	463.95	464.38
23	464.62	463.64	463.35	462.51	463.98	462.61	464.56	463.30	463.05	463.56	463.72	463.82
24	464.68	463.53	462.29	462.55	463.98	462.90	464.66	463.43	463.40	463.56	462.89	464.19
25	464.62	462.98	462.69	462.77	463.82	463.01	464.68	463.19	463.52	463.55	463.00	464.15
26	464.56	463.22	463.04	463.03	462.48	462.83	464.67	463.29	465.03	463.56	463.59	463.36
27	464.37	463.76	463.08	463.21	462.89	462.71	464.66	463.18	464.68	462.87	463.58	464.20
28	463.08	463.88	463.00	462.46	463.42	462.80	464.70	463.42	464.27	462.43	463.69	464.51
29	463.27	463.90	462.82	462.81	463.52	462.76	465.39	463.37	463.88	462.69	463.59	463.96
30	463.93	.....	462.69	463.52	463.50	462.41	464.88	463.54	464.12	463.64	463.54	463.77
31	463.90	.....	461.98	.....	463.45	.....	465.41	463.52	.....	463.66	.....	464.52

These records correspond to the certified copy of April 3rd, 1915, as furnished by the Department of Public Works, Canada, and are platted on the graphs of water levels. The following additional corrections were certified to on May 17th, 1915. (Engrs.)

1911 Oct 4	462.56	1912 May 30	463.00
		June 2	462.73
		July 20	463.97

*TABLE 35—Continued

WATER LEVELS—RAINY RIVER—INTERNATIONAL FALLS, MINN., U. S. G. S. GAUGE ON DOCK

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. Datum.]

Day.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1913												
1	464.61	465.56	465.59	464.24	465.35	464.40	466.75	465.98	462.48	463.27	463.54	463.52
2	464.59	464.32	464.86	464.13	465.09	464.64	466.78	466.03	463.49	463.25	463.19	464.16
3	464.76	464.26	465.04	463.77	465.09	465.10	466.94	465.60	463.62	463.17	463.37	464.31
4	464.91	465.32	465.53	463.85	464.76	465.01	466.14	465.73	463.70	462.99	463.55	464.08
5	464.05	465.49	465.62	463.80	463.99	464.86	466.44	465.51	463.74	462.99	463.55	463.75
6	464.34	465.50	465.67	463.04	464.53	464.99	466.79	465.27	463.70	463.31	463.51	463.97
7	464.93	465.50	465.66	463.01	464.50	465.16	466.96	465.35	463.65	463.71	463.49	463.58
8	464.92	465.49	465.65	463.71	465.39	465.21	466.84	465.74	463.87	464.00	463.53	464.99
9	465.05	465.30	464.66	463.85	465.34	465.59	466.74	465.64	463.77	464.23	462.79	465.53
10	465.07	464.46	465.35	463.83	464.93	465.69	467.51	465.46	463.82	464.43	462.52	465.54
11	465.18	465.43	465.17	463.91	464.40	465.46	467.64	465.12	463.96	464.76	462.92	465.44
12	464.37	465.60	465.09	463.96	464.44	465.14	467.74	465.24	463.88	464.53	463.39	465.27
13	464.75	465.58	464.99	463.19	464.50	464.89	468.04	465.24	463.85	464.37	463.49	465.18
14	465.15	465.67	464.78	463.79	464.36	464.75	468.44	465.24	463.39	464.83	463.45	464.29
15	465.19	465.69	464.73	464.49	464.44	464.22	468.69	465.28	463.70	464.83	463.50	464.46
16	465.18	464.57	464.25	465.56	464.54	464.61	468.54	465.29	463.86	464.57	463.54	464.85
17	465.06	464.67	464.47	465.72	464.54	464.59	468.79	465.16	463.85	464.58	463.20	464.76
18	464.26	465.40	464.90	465.74	464.19	465.59	468.99	465.16	463.79	464.38	463.38	464.85
19	464.51	465.47	465.10	465.75	464.28	464.54	468.94	465.13	463.77	464.34	463.36	464.83
20	464.39	465.56	465.35	464.88	465.34	464.79	468.49	465.24	463.77	464.14	463.32	464.99
21	465.17	465.62	465.31	465.24	465.30	465.11	468.34	465.24	463.30	464.56	463.31	464.40
22	465.30	465.51	465.33	465.23	465.22	465.63	468.09	465.27	463.69	464.41	463.57	464.10
23	465.35	464.65	464.30	465.16	465.24	465.24	467.99	465.34	463.58	464.20	463.36	464.58
24	465.40	464.89	464.44	465.13	465.24	465.27	467.84	464.21	463.54	464.10	463.43	464.67
25	465.14	465.51	465.08	465.31	464.84	465.29	467.74	464.16	463.40	464.08	464.00	464.23
26	464.29	465.65	465.08	465.69	464.89	465.24	.....	463.91	463.30	463.75	464.02	463.95
27	464.31	465.74	465.16	465.44	464.86	465.24	467.34	463.84	463.27	463.69	464.06	464.55
28	465.30	465.62	465.11	465.71	464.69	465.66	467.34	463.81	463.17	463.62	463.06	464.20
29	465.40	.....	464.99	465.84	464.46	466.44	467.44	463.76	463.26	463.67	463.41	464.44
30	465.42	.....	463.99	465.61	464.59	466.66	467.24	463.67	463.31	463.60	463.45	464.69
31	465.57	.....	463.88	.....	464.73	.....	466.38	462.26	.....	463.59	.....	464.82
1914												
1	465.15	.....	464.95	463.70	465.60	465.22	465.55	465.60	465.40	465.80	464.90	465.65
2	465.16	.....	465.07	463.84	466.20	465.67	464.85	464.85	465.70	465.80	465.00	465.90
3	465.08	.....	465.19	463.85	466.40	465.50	465.25	464.90	465.70	465.60	465.85	465.75
4	464.51	.....	465.18	463.86	466.85	465.37	464.60	465.52	465.70	464.45	466.00	465.70
5	464.59	465.32	465.01	463.14	467.05	465.25	463.25	465.55	465.70	464.20	465.93	465.65
6	464.86	465.57	465.00	463.64	467.14	465.20	464.72	465.60	464.85	465.45	465.80	464.45
7	464.88	465.63	464.92	463.74	467.10	464.47	465.55	465.65	462.97	465.55	465.90	464.10
8	464.83	.....	464.64	463.76	466.95	464.52	465.60	465.60	463.55	465.62	464.75	465.35
9	464.77	464.82	464.18	463.91	466.20	465.40	465.75	464.85	465.40	465.60	464.75	465.65
10	464.90	465.52	464.79	463.90	465.95	466.55	465.72	464.72	465.50	465.65	465.80	465.83
11	464.45	465.62	464.84	463.92	465.70	467.20	465.65	465.50	465.50	464.40	465.85	465.93
12	464.82	465.70	464.79	463.83	465.75	467.17	464.92	465.60	465.50	464.85	465.80	466.08
13	465.23	.....	464.74	463.84	465.55	466.92	465.75	465.60	464.75	465.80	465.65	465.30
14	465.17	465.65	.....	463.84	465.40	465.95	467.35	465.60	464.55	466.00	465.60	465.35
15	464.95	.....	464.11	463.84	465.25	465.35	467.72	465.65	464.60	465.75	464.50	466.28
16	464.77	.....	463.94	463.94	465.15	465.77	467.62	464.62	465.70	465.70	464.55	466.45
17	464.90	465.69	464.24	463.95	464.55	465.70	467.30	464.45	465.80	465.75	465.75	466.35
18	464.36	465.71	464.32	464.09	464.60	465.52	467.20	465.45	465.80	464.80	465.85	466.30
19	463.87	465.74	464.34	464.32	464.85	465.40	465.95	465.50	465.90	464.55	466.50	466.30
20	464.58	.....	464.36	.....	465.52	465.25	466.10	465.57	465.10	465.80	466.70	465.10
21	465.11	465.56	464.34	465.04	466.70	464.45	466.40	465.55	464.90	465.85	466.80	464.30
22	465.25	464.89	464.19	464.89	466.75	464.35	466.65	465.52	465.75	465.85	466.10	466.15
23	465.18	.....	464.09	464.84	466.55	464.90	467.02	464.75	465.80	466.00	465.90	466.40
24	465.35	465.51	464.15	.....	465.92	465.05	466.85	464.60	465.90	465.90	466.60	466.70
25	464.59	465.65	464.15	.....	465.75	465.10	466.80	465.40	465.90	464.88	466.50	464.00
26	463.92	465.52	464.14	464.64	465.90	465.15	466.50	465.55	465.95	465.10	466.30	462.25
27	464.70	465.67	464.14	464.64	465.80	465.00	466.30	465.60	465.20	465.85	465.95	463.35
28	465.72	.....	464.14	464.69	465.72	464.27	466.60	465.60	464.70	466.00	465.15	464.85
29	465.65	.....	463.92	464.76	466.05	464.20	466.60	465.60	465.65	466.10	464.50	466.00
30	465.60	.....	463.54	464.83	466.12	465.07	466.20	464.70	465.75	466.00	463.95	466.75
31	465.30	.....	463.65	.....	465.42	.....	465.85	464.55	.....	465.90	.....	466.70

* For 1915 records see page 312.

These records correspond to the certified copy of April 3rd, 1915, as furnished by the Department of Public Works, Canada, and are platted on the graphs of water levels. The following additional corrections were certified to on May 17th, 1915. (Engrs.)

1913 Jan. 5 464.10
Jan. 26 464.34
1913 June 22 465.46
Nov. 16 463.04
1914 May 9 466.60
July 1 465.05

TABLE 36

WATER LEVELS—RAINY RIVER—INTERNATIONAL FALLS, MINN.

RECORDS OF MINNESOTA & ONTARIO POWER CO. REFERRED TO PUBLIC WORKS (CANADA) DATUM

1907	JANUARY			FEBRUARY			MARCH			APRIL		
	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water
1								486.80	464.00		486.50	463.00
2								486.80	464.00		486.50	462.60
3								486.80	464.00		486.50	462.60
4								486.80	464.00		486.50	462.50
5								486.80	464.00		486.50	462.40
6								486.80	464.00		486.50	462.40
7								486.80	464.00			
8								486.70	464.00		486.50	462.60
9								486.70	464.00		486.50	462.50
10								486.70			486.50	462.50
11								486.70	463.90		486.50	462.60
12								486.70	463.80		486.50	462.50
13								486.70	463.70		486.50	462.50
14								486.70	463.70		486.50	462.50
15								486.70	463.70		486.50	462.40
16								486.70	463.70		486.50	462.30
17								486.70			486.50	462.30
18								486.70	463.50		486.50	462.50
19								486.70	463.50		486.50	462.60
20								486.70	463.50		486.50	462.60
21								486.70	463.30		486.50	
22								486.70	463.30		486.50	462.70
23								486.70	463.00		486.50	
24											486.50	
25								486.70	462.90		486.50	463.70
26								486.70	462.50		486.50	463.70
27								486.70	462.70		486.50	463.80
28								486.70	462.80		486.60	463.50
29								486.70	462.80		486.60	463.50
30								486.70	462.80		486.60	463.40
31												

1907	MAY			JUNE			JULY			AUGUST		
	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water
1		486.60	463.30		488.30	466.00					492.40	467.70
2		486.60			488.40	465.90		491.10			492.40	467.70
3		486.60	463.60		488.50	465.80		491.20	467.10			
4		486.70	463.80		488.60	465.60						
5		486.70			488.80	465.50		491.40	467.20		492.20	
6		486.80	464.00		488.90	465.40						
7					489.00						492.30	467.80
8		486.80	463.90		489.10	465.50		491.60	467.40		492.40	467.90
9		486.80	464.00		489.10			491.70			492.40	467.90
10		486.90	463.90		489.20	465.40					492.40	467.90
11		486.90	464.00		489.30	465.40		491.80				
12		486.90			489.40	465.50					492.90	469.40
13		487.00	464.00		489.50						493.10	469.90
14		487.10	463.90		489.60	465.60					493.25	469.50
15		487.10			489.70			491.90	467.60		493.30	469.50
16		487.20	464.40		489.80			491.90	467.60		493.20	469.40
17			464.90		489.80	465.70					493.30	469.20
18			465.20		489.90	465.70		492.00				469.25
19			465.50		490.00	465.80					493.40	469.50
20		487.40	465.60		490.00	465.80		492.10			493.50	469.50
21		487.40	465.60		490.10						493.60	469.60
22		487.50	465.50		490.20						493.70	469.60
23		487.60	465.50		490.40			492.20	468.00			469.60
24		487.70	465.60		490.50	466.20						469.60
25		487.80	465.60		490.60	466.30		492.30				
26		487.90	465.70		490.70						493.90	469.75
27		488.00	465.85		490.80							469.75
28		488.10	466.20									469.75
29			466.20		491.10	466.50						
30		488.20	466.10				1				494.10	469.90
31		488.30	466.10					492.30			494.20	470.20

1. Down stream gauge taken away.

TABLE 36—Continued

WATER LEVELS—RAINY RIVER—INTERNATIONAL FALLS, MINN.

RECORDS OF MINNESOTA & ONTARIO POWER CO. REFERRED TO PUBLIC WORKS (CANADA) DATUM

1907	September			October			November			December		
	Footnote	Head Water	Tail Water	Footnote	Head Water	Tail Water	Footnote	Head Water	Tail Water	Footnote	Head Water	Tail Water
1					494.70	470.60		493.90	469.70			
2					494.70	470.60		493.90	469.70			468.40
3					494.70	470.55						
4		494.30	470.20		494.70	470.50		493.80	469.60		492.30	468.90
5		494.40	470.20		494.70	470.50		493.80	469.60		492.30	468.90
6		494.40	470.20					493.70	469.60		492.20	469.00
7		494.40	470.20		494.70	470.60		493.70	469.50			
8					494.70	470.60		493.60	469.50			
9		494.50	470.30		494.60	470.50		493.60	469.50			
10		494.50	470.30		494.60	470.60					492.05	
11		494.50	470.30		494.60	470.50		493.40	469.40			
12		494.40	470.20		494.50	470.50		493.40	469.30			
13		494.40	470.30					493.40	469.20			
14		494.40	470.30		494.50	470.50		493.30	469.10			
15			470.30		494.50	470.40	1	493.30	469.10		491.80	
16		494.50	470.30		494.40	470.30		493.20	469.10			
17		494.50	470.30		494.40	470.30						
18		494.50	470.30		494.30	470.30						
19		494.60	470.30		494.30	470.30		493.10	468.90		491.60	469.20
20		494.60	470.50					493.10	468.90			
21		494.50	470.50					493.00	468.80			
22								493.00	468.70			
23		494.70	470.80		494.10	469.90		492.90	468.60			
24		494.65	470.80		494.00	469.80						
25		494.70	470.80		494.00	469.80		492.70	468.60		491.30	
26		494.70	470.80		494.00	469.80		492.70	468.50	2		
27		494.70	470.80					492.70	468.50			
28		494.70	470.80		493.90	469.70						
29					494.00	469.80						
30		494.70	470.70		494.00	469.80						
31					493.90	469.80					490.90	468.80

1908	January			February			March			April		
	Footnote	Head Water	Tail Water	Footnote	Head Water	Tail Water	Footnote	Head Water	Tail Water	Footnote	Head Water	Tail Water
1												
2												
3		490.80	468.80									
4								488.34	466.10			
5												
6					489.20	467.60						
7											487.40	462.10
8		490.50	468.50									
9												
10								488.00	465.70			
11												
12												
13		490.30	468.00		489.00	467.00						
14												
15												
16												
17												
18		490.10	468.00								487.50	464.10
19								487.80	465.60			
20					488.70	466.80						
21												
22												
23		489.80	468.20									
24												
25												
26												
27												
28					488.40	466.60						
29												
30								487.50	463.60		488.00	467.50
31		489.40	467.80									

1. Rainy Lake frozen.
2. Up to Dec. 26 no snow storms or severe weather.

TABLE 36—Continued

WATER LEVELS—RAINY RIVER—INTERNATIONAL FALLS, MINN.

RECORDS OF MINNESOTA & ONTARIO POWER CO. REFERRED TO PUBLIC WORKS (CANADA) DATUM

1908	May			June			July			August	
	Footnote	Head Water	Tail Water	Head Water	Tail Water	Footnote	Head Water	Tail Water	Footnote	Head Water	Tail Water
1										492.40	468.50
2											
3				489.30	467.20		491.60	467.70			
4											
5											
6							491.80	467.70		492.40	468.30
7											
8							491.80	467.70			
9				489.80	468.60						
10											
11							492.00	467.80		492.30	468.20
12											
13				490.00	469.00						
14											
15		488.40	466.60							492.30	468.20
16							492.20	468.00			
17											
18				490.50	467.30					492.30	468.20
19											
20							492.40	469.10			
21										492.20	468.00
22											
23											
24											
25							492.50	468.80			
26				491.00	467.60					491.80	467.30
27		489.00	468.20								
28							492.50	468.60			
29											
30											
31										491.60	467.50

1908	September		October		November		December	
1			490.25	466.25			487.74	465.50
2			490.20	466.25	488.78	464.78	487.72	465.80
3	491.40	467.30			488.72	464.70	487.72	465.65
4					488.68	464.64	487.68	465.50
5			490.00	466.05	488.66	464.60	487.66	465.35
6					488.58	464.45		
7					488.56	464.40	487.60	465.18
8	491.20	467.00					487.56	465.10
9					488.44	464.30	487.52	465.05
10					488.44	464.25	487.52	465.00
11	491.10	466.90			488.40	464.21	487.46	464.90
12					488.40	464.20	487.44	464.85
13					488.38	464.18		
14					488.36	464.15	487.38	464.72
15			489.58	465.46			487.36	464.65
16	490.90	466.60	489.55	465.42	488.22	464.02	487.34	464.60
17	490.80	466.60	489.54	465.42	488.20	464.00	487.32	464.55
18	490.80	466.50			488.16	463.96		
19	490.80	466.50	489.54	465.29	488.12	463.92	487.24	464.45
20					488.08	463.92		
21	1 490.60	466.40	489.33	465.25	488.08	463.88	487.24	464.45
22							487.32	464.45
23					487.98	463.78	487.32	464.40
24			489.20	465.08	487.98	463.75	487.32	464.38
25					487.92	463.70		
26	490.50	466.30	489.15	465.08	487.86	463.70	487.28	464.25
27					487.82	463.65		
28			489.00	465.02	487.80	463.65	487.24	464.15
29			488.92	465.00			487.22	464.10
30			488.90	464.92	487.78	463.60	487.20	464.10
31			488.88	464.90			487.18	464.80

1. Rainy Lake, 492.3.

TABLE 36—Continued

WATER LEVELS—RAINY RIVER—INTERNATIONAL FALLS, MINN.

RECORDS OF MINNESOTA & ONTARIO POWER CO. REFERRED TO PUBLIC WORKS (CANADA) DATUM

1909	JANUARY			FEBRUARY			MARCH			APRIL		
	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water
1		487.18	464.25		486.76	464.10		486.26	463.70	2	484.88	462.75
2		487.16	464.20		486.76	464.05		486.26	463.65		484.84	462.60
3					486.76	464.00		486.24	463.62		484.82	462.50
4		487.16	464.20		486.74	464.00		486.24	463.60			
5		487.12	464.25		486.72	463.95		486.24	463.52		485.12	462.40
6		487.12	464.25		486.58	463.90		486.24	463.40		485.62	462.00
7		487.10	464.25									
8		487.06	464.25		486.52	463.95		486.24	463.25		485.58	461.90
9		487.06	464.30		486.52	463.95		486.20	463.23		485.58	461.80
10					486.50	463.95		486.20	463.15		485.62	461.70
11		487.00	464.30		486.48	463.95		486.18	463.20			
12		487.00	464.30		486.46	463.95		486.18	463.10		485.92	461.50
13		486.88	464.25					486.32	462.90		486.60	460.40
14		486.96	464.25		486.42	463.92					486.62	460.30
15		486.96	464.30		486.42	463.90		486.32	462.80		486.64	460.30
16		486.94	464.25		486.40	463.90		486.40	462.80		486.66	460.25
17					486.40	463.90	1	485.12	463.60		486.77	460.15
18		486.92	464.20		486.38	463.90		484.96	463.60			
19		486.88	464.20		486.36	463.85		484.66	463.60		486.90	459.61
20		486.88	464.15					484.64	463.60		487.02	459.47
21		486.86	464.05		486.34	463.85					487.06	458.72
22		486.84	463.95		486.32	463.80		484.60	463.40		487.07	459.38
23		486.84	463.90		486.32	463.80		484.60	463.30		487.14	459.46
24					486.32	463.80		484.58	463.25		487.16	459.68
25		486.88	464.15		486.30	463.75		484.56	463.25			
26		486.88	464.05		486.28	463.72		484.76	463.25		487.22	459.85
27		486.84	464.00					484.76	463.20		487.24	459.95
28		486.84	464.00								487.32	459.92
29		486.80	464.20					484.76	463.20		487.52	459.98
30		486.78	464.30					484.74	463.10		487.40	460.22
31								484.78	462.90			

1909	MAY			JUNE			JULY			AUGUST		
1		487.44	460.42		491.68	459.19		493.71	466.31		493.90	465.32
2		487.46	460.50		491.78	459.97		493.93	466.33		493.93	465.27
3					491.90	461.02		493.88	466.38		493.92	465.36
4					491.95	462.16					493.89	465.76
5					492.00	462.55		493.84	466.30		493.92	465.62
6	3	487.75	460.60		492.11	462.86		493.91	466.43		494.05	465.73
7		487.84	460.88		492.25	462.11		493.93	466.33		494.15	465.82
8		487.95	461.18		492.29	462.31		493.93	466.35			
9		488.07	461.51		492.25	463.05		493.81	466.38		494.21	465.90
10		488.18	461.63		492.32	463.15		493.87			494.29	466.17
11		488.30	461.61		492.36	463.39		493.87	466.23		494.16	466.35
12		488.41	461.56		492.45	463.18		493.83	466.16		494.33	466.36
13		488.62	462.31					494.00	465.64		494.09	467.50
14		488.84	463.92		492.48	463.70		494.00	465.68		494.07	467.98
15		489.03	464.96		492.41	463.82		493.98	465.63			
16		489.20	465.31		492.54	463.88		493.96	465.88		494.02	467.88
17		489.38	465.04		492.56	463.82		493.94	465.93		494.15	467.63
18		489.58	464.36		492.63	463.88		494.05			494.15	467.15
19		489.75	463.70		492.65			493.79	466.53		494.12	467.00
20		489.93	463.07					493.78	466.53		494.07	466.93
21		490.12	462.38		493.23	463.94		493.78	466.53		493.95	467.23
22		490.25	461.83		493.35	464.71		493.74	466.48			
23		490.41	461.31		493.44	464.83		493.77	466.34		494.00	466.83
24		490.56	460.85		493.50	465.08		493.72	466.00		494.32	
25		490.74	460.46		493.56	465.28					494.33	465.73
26		490.85	460.03		493.65	465.44		493.83	465.78		494.64	463.98
27	4	490.99	459.69		493.58	465.66		494.00	465.12		494.63	464.14
28	5	491.15	459.41		493.76	465.89		493.90	465.52		494.60	
29		491.29	459.09		493.35	466.12		493.80	465.64			
30		491.47	458.88		493.75	466.28		493.89	465.43		494.71	464.50
31		491.55	459.03					493.96	465.38		494.76	464.40

1. Coffer "B" blown out.
2. Big blast turning river into Canadian Fore Bay.
3. Balance of waste gates closed.
4. Log sluice opened.
5. Gates opened.

TABLE 36—Continued

WATER LEVELS—RAINY RIVER—INTERNATIONAL FALLS, MINN.

RECORDS OF MINNESOTA & ONTARIO POWER CO. REFERRED TO PUBLIC WORKS (CANADA) DATUM

1909	September			October			November			December		
	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water
1		494.64	464.90		494.36	464.87		494.42	464.96		495.91	462.96
2		494.71	464.57		494.36	464.82		494.37			495.99	463.00
3		494.63	464.88					494.40			495.97	463.86
4		494.65	465.26		494.35	464.77					495.93	
5		494.58			494.30	464.76					495.95	
6		494.60	465.43		494.17	465.58					495.91	466.37
7		494.65	464.73		494.15	465.62					496.00	468.05
8		494.71	464.40		494.06	465.60		494.67			495.98	468.55
9		494.63	465.10		494.08	465.59		494.74			495.98	468.63
10		494.58	465.44								495.92	
11		494.56	465.80		494.03	465.73					495.96	
12					493.98	465.83		494.87	462.15			
13		494.45	465.86		493.75	465.92		494.95	461.64		496.01	468.33
14		494.45	465.84								495.98	468.23
15		494.43	465.83					495.10	461.67		496.01	
16		494.42						495.25			495.99	468.02
17		494.41	465.82					495.19			495.99	
18		494.37	465.77					495.29	461.86		496.02	468.10
19					494.23	463.82		495.33	461.92			
20		494.51	464.84		494.33	463.90		495.40	461.97		496.04	467.96
21		494.48	464.84		494.46	464.23					496.04	
22		494.48	464.91		494.42	464.56		495.52	462.21		496.04	
23		494.48	464.94		494.58	464.79		495.58	462.52		496.07	467.58
24		494.53	464.96		494.45	465.21						
25		494.51	464.98		494.54	465.27		495.67	461.26			
26					494.48	465.57		495.75	461.58			
27		494.48	465.00		494.56	465.65			462.92		496.01	468.08
28		494.40	465.00		494.60	465.49					496.03	468.08
29		494.41	464.95		494.62	465.32		495.80	463.00		496.03	468.08
30		494.36	464.91			465.17		495.83	463.00			
31												

1910	January			February			March			April		
1		495.95	467.95		495.40	467.00					493.40	467.16
2					495.40	467.00		494.05	467.36			
3		495.98	468.08		495.35	467.10		494.05	467.26			
4					495.35	467.10		494.05	467.06		493.55	466.86
5		495.97	468.06		495.30	467.35		494.05	466.86		493.65	466.76
6		495.97	468.05								493.75	466.66
7		495.92	468.11		495.15	467.15		493.95	466.76		493.75	466.66
8		495.90	468.14		495.15	467.15		493.85	466.66		493.85	466.56
9					495.05	467.10		493.75	466.61		493.85	466.46
10		495.88	468.05		495.00	467.45		493.75	466.56			
11		495.87	468.03		494.95	467.30					493.95	466.06
12		495.85	468.04		494.95	467.30					493.95	466.06
13		495.85	467.97								493.95	465.96
14		495.80	467.90		494.85	467.30					493.95	465.96
15		495.75	467.85		494.80	467.36		493.43	465.91		494.05	466.06
16					494.75	467.66					494.05	466.06
17		495.78	467.55								494.25	466.16
18		495.75	467.65								494.25	466.76
19		495.75	467.65								494.40	467.56
20		495.74	467.65		494.45	467.56					494.55	467.96
21		495.75	467.66		494.45	467.56		493.15	465.66		494.55	467.96
22		495.65	467.54		494.40	467.56		493.25	465.50		494.45	467.96
23					494.35	467.56		493.25	465.36		494.45	467.96
24		495.60	467.40		494.35	467.56		493.15	466.16			
25		495.60	467.40		494.35	467.56		493.15	465.76		494.60	467.16
26		495.55	467.25		494.25	467.56		493.20	465.96		494.65	466.96
27											494.75	466.66
28		495.50	467.20		494.15	467.26		493.15	466.56		494.60	466.76
29		495.45	467.10					493.25	466.36		494.65	466.76
30		495.60	467.15					493.35	466.76		494.75	466.56
31		495.60	467.15					493.40	467.06			

TABLE 36—Continued

WATER LEVELS—RAINY RIVER—INTERNATIONAL FALLS, MINN.

RECORDS OF MINNESOTA & ONTARIO POWER CO. REFERRED TO PUBLIC WORKS (CANADA) DATUM

1910	May			June			July			August		
	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water
1					494.55	464.86		493.35	465.46		493.05	461.66
2		494.65	466.76		494.40	465.86		493.15	465.66		493.00	463.16
3		494.65	466.86		494.55	464.86					492.75	463.16
4		494.65	466.86		494.70	464.36					492.85	463.36
5		494.65	466.76					493.15	464.66		492.85	463 21
6		494.65	466.76		494.65	465.16		493.05	465.06		492.85	463.21
7		494.65	466.76		494.25	466.26		493.25	464.86		492.85	461.76
8					494.45	465.86		493.30	463.96		492.65	462.66
9		494.60	466.76		494.05	466.86		493.25	463.81		492.75	463.26
10		494.45	466.96		493.85	466.66		493.45	462.36		492.85	462.76
11		494.35	467.56		493.85	466.86		493.35	462.86		492.85	462.26
12		494.15	467.26					493.40	463.56		492.85	462.56
13		494.80	467.26		493.80	466.36		493.25	463.76		492.85	462.66
14		494.80	465.46		493.70	466.86		493.25	463.66		492.85	461.96
15					493.75	466.56		493.25	463.56		492.85	461.96
16		494.75	465.56		493.75	466.60		493.40	463.36		492.75	461.96
17		494.75	465.56		493.75	466.56					492.75	462.46
18		494.60	465.96		494.15	464.81		493.25	461.36		492.70	462.46
19		494.65	466.26					493.10	463.21		492.60	462.56
20		494.95	464.41		494.05	464.86		493.05	463.16		492.60	462.56
21		494.85	465.01		494.00	464.86		493.05	463.06			
22					493.75	465.36		493.15	462.76		492.55	461.46
23		494.75	465.40		493.80	465.26		493.20	462.36		492.55	462.56
24		494.60	466.36		493.65	465.96					492.55	462.66
25		494.85	465.96		493.55	465.86		493.25	462.30		492.50	462.66
26		494.85	464.86					493.05	462.16		492.35	462.76
27		494.60	465.66		493.55	465.36		493.25	462.00		492.40	463.66
28		494.35	466.56		493.50	465.36		493.15	462.86			
29					493.50	465.36		492.95	463.06		492.40	461.46
30					493.40	465.06		493.00	463.16		492.15	462.86
31		494.70									492.25	462.76

1910	September			October			November			December		
	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water
1		492.25	462.66		491.45	462.36		489.80	463.55		488.80	463.86
2		492.30	462.46					490.70	461.24		488.70	463.86
3		492.30	462.46		491.30	462.26		489.65	463.46		488.60	464.01
4					491.25	462.26		489.57	463.66			
5					490.95	462.26		489.45	463.66		489.10	461.06
6					491.01	462.26					488.80	463.36
7		492.25	462.46		490.99	463.04		490.40	461.21		488.60	463.36
8		492.25	462.46		490.85	462.76		489.30	463.51		488.36	463.96
9		492.25	462.46		490.85	462.76		489.30	463.51		488.35	464.06
10		492.25	462.46		490.85	460.56		489.20	463.53		488.23	464.16
11					490.85	462.96		489.16	463.51			
12		492.25	462.46		491.00	462.96		489.10	463.61		488.50	462.66
13		492.15	462.56		490.35	463.11					488.70	463.16
14		491.95	462.36		490.85	463.26		489.10	462.76	1	488.73	463.06
15		491.85	462.36		490.35	463.86		489.00	463.51		488.15	463.76
16		491.80	462.36		491.25	460.66		488.85	463.61		488.40	463.56
17		491.75	462.36		491.05	461.86		488.80	463.76		488.40	463.46
18		491.65	462.46		490.60	462.61		488.70	463.86			
19		491.65	462.46		490.90	463.11		488.80	464.21		488.58	461.46
20		491.65	462.46		490.61	463.16					488.25	463.16
21		491.65	462.46		490.57	463.11		489.00	463.76	2	488.23	463.46
22		491.65	462.46		490.50	463.21		488.55	464.86		488.20	463.56
23		491.70	462.46					489.10	464.46		488.50	463.10
24		491.65	462.46		490.82	461.86		489.00	464.16		488.50	463.00
25		491.75	462.46		490.24	463.54		488.90	464.26			
26		491.55	462.56		490.21	463.54		488.90	464.06			
27		491.55	462.36		490.11	463.51					488.60	461.40
28		491.50	462.46		490.10	463.45		489.10	461.76		488.35	462.86
29		491.55	462.46		490.05	463.46		489.10	463.36		488.15	463.56
30		491.45	462.36					488.70	463.86		488.15	463.66
31					490.07	462.74					488.15	463.76

1. Rainy Lake, 488.79.

2. Rainy Lake, 488.69.

TABLE 36—Continued

WATER LEVELS—RAINY RIVER—INTERNATIONAL FALLS, MINN.

RECORDS OF MINNESOTA & ONTARIO POWER CO. REFERRED TO PUBLIC WORKS (CANADA) DATUM

1911	January			February			March			April		
	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water
1					488.30	462.26		488.15	462.16	4		
2		488.65	461.46		488.35	462.26		488.15	462.21			
3		488.45	462.56		488.30	462.46		488.05	462.36		487.60	
4		488.40	462.86		488.30	462.56	3	487.95	462.86		487.82	
5		488.40	462.76								487.85	
6		488.35	462.76		488.45	461.46		488.05	462.06		487.85	
7		488.05	463.56		488.35	462.46		487.90			487.83	
8					488.30	462.62					487.85	
9		488.40	461.66		488.20	462.66						
10		488.25	462.86		488.25	462.66					487.80	
11		488.25	463.06		488.20	462.56		487.75			487.85	
12		488.05	463.36								487.90	
13		488.15			488.35	461.46		487.75			488.13	
14		488.10	463.16	2							488.05	
15								487.65			488.15	
16		488.48	461.84									
17		488.35	462.36					487.95			488.40	
18		488.15	462.86					487.85			488.40	462.25
19		488.30	462.36								488.40	462.00
20		488.45	462.26					487.85			488.50	462.00
21		488.28	462.26					487.85			488.55	461.91
22								487.75			488.67	461.87
23		488.35	461.46					487.85				
24		488.40	462.06					487.85			488.80	461.45
25		488.45	461.86		488.25	462.16		487.85			488.83	461.60
26		488.40	461.96					487.85			488.87	461.38
27		488.35	462.06		488.25	461.36		487.85			489.00	461.25
28	1	488.30	462.36		488.10	462.06		487.85			489.05	461.23
29								487.95			489.10	461.03
30		488.45	461.36					487.90				
31		488.30	462.16					487.85				

1911	May			June			July			August		
	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water
1	5	489.15	460.87	6	489.75	463.25	7	492.10	461.50	8		
2		489.05	461.53		489.85	463.25					493.03	463.60
3		489.05	461.67		489.93	463.25		492.25	460.65		493.08	463.60
4		489.15	461.57								493.08	463.65
5		489.20	461.57		490.25	462.85		492.30	461.00		493.00	463.75
6		489.20	461.47		490.00	463.60		492.25	461.67			
7					490.15	463.65		492.25	461.67		493.22	462.00
8		489.30	460.95		490.35	463.65		492.50	461.63		493.20	463.50
9		489.25	461.45		490.36	463.65					493.18	463.58
10		489.17	461.95		490.50	464.07		492.40	461.50		493.11	463.70
11		488.79	462.45					492.30	461.80		493.13	463.70
12		488.85	462.65		491.15	462.80					493.10	463.70
13		489.26	462.48		490.85	464.80		492.55	461.70		493.30	461.90
14					490.90	465.05		492.57	461.67		493.10	463.20
15		489.73	461.26		491.00	464.87		492.60	461.85		493.15	463.50
16		489.31	462.60		490.95	464.77					493.15	463.60
17		489.10	463.05		491.03	464.45		492.70	461.65		493.15	463.65
18		489.55	462.30					492.75	461.58		493.04	463.80
19		489.23	462.80		491.25	462.40		492.80	461.58		493.05	463.65
20		489.13	463.10		491.29	463.80		492.85	461.10			
21					491.34	463.85		492.85	460.85		493.10	462.50
22		489.47	462.00		491.40	463.70		492.85	460.85		493.02	463.60
23		489.30	463.00		491.50	463.65					493.01	463.70
24		489.22	463.10					492.95	461.65		492.95	463.70
25		489.35	463.00					492.97	461.00		492.99	463.75
26		489.50	463.00		491.74	462.65		492.78	463.05		493.02	463.70
27		489.50	463.00		491.75	462.65		492.75	463.25			
28					491.84	462.57		492.82	463.38		493.16	462.75
29		489.70	461.80		492.05	461.80		492.78	463.55		493.10	463.55
30		489.64	463.18		492.07	461.40					493.12	463.65
31		489.70	463.25					492.93	462.38		493.09	463.65

1. 488.70 Rainy Lake.
2. 488.65 Rainy Lake.
3. 488.54 Rainy Lake.
4. 488.30 Rainy Lake.
5. 489.35 Rainy Lake.
6. Average waste for June 35 c. f. s.
7. Average waste for July 366 c. f. s.
8. Average waste for August 200 c. f. s.

TABLE 36—Continued

WATER LEVELS—RAINY RIVER—INTERNATIONAL FALLS, MINN.

RECORDS OF MINNESOTA & ONTARIO POWER CO. REFERRED TO PUBLIC WORKS (CANADA) DATUM

1911	SEPTEMBER			OCTOBER			NOVEMBER			DECEMBER		
	Footnote	Head Water	Tail Water	Footnote	Head Water	Tail Water	Footnote	Head Water	Tail Water	Footnote	Head Water	Tail Water
1	1	493.10	463.65					492.50	462.45		492.05	464.22
2		493.07	463.65		492.81	462.10		492.37	462.45		492.02	464.15
3					492.92	462.60		492.38	462.45			
4					492.80	462.90		492.50	462.17		492.06	463.50
5		493.05	463.40		492.85	462.85					492.02	464.05
6		493.09	463.60		492.77	462.88		492.47	461.95		491.97	464.02
7		492.98	463.65		492.76	462.78		492.31	462.35		491.96	463.90
8		492.92	463.55					492.45	462.27		491.94	463.85
9		492.92	463.55		492.82	461.95		492.44	462.35		491.87	464.00
10					492.80	462.28		492.15	462.70			
11		492.95	463.35		492.76	462.75		492.56	462.10			
12		492.90	463.37		492.75	462.85					491.88	463.48
13		492.88	463.30		492.74	462.85		492.35	463.77		491.87	463.55
14		492.90			492.76	462.67		492.33	463.95		491.85	463.50
15		492.70	463.40					492.32	464.12			
16		492.90			492.85	461.70		492.30	464.12			
17					492.72	462.55		492.30	464.12		491.95	462.80
18		492.92	461.80		492.84	462.45		492.26	464.17		492.02	461.80
19		492.80	462.95		492.64	462.80		492.55	463.45		491.77	463.30
20		492.80	462.95		492.60	463.05		492.25	463.12		491.75	463.45
21		492.76	463.00		492.64	462.75		492.20	464.12		491.73	463.45
22		492.81	463.00					492.22	464.22		491.70	463.40
23		492.89	462.90		492.64	462.10		492.22			491.70	463.30
24					492.60	462.05		492.19	464.40			
25		492.81	462.10		492.56	462.65		492.10	464.60			
26		492.81	462.65		492.55	462.75					491.70	462.55
27		492.81	462.65		492.48	462.90		492.25	462.67		491.55	464.30
28		492.75	462.85		492.48	462.73		492.13	464.02		491.50	464.50
29		492.75	462.90		492.60						491.50	464.60
30		492.77	462.85		492.48	462.73		492.05			491.47	464.55
31					492.56	462.35						

1912	JANUARY			FEBRUARY			MARCH			APRIL		
	Footnote	Head Water	Tail Water	Footnote	Head Water	Tail Water	Footnote	Head Water	Tail Water	Footnote	Head Water	Tail Water
1		491.62	462.80		490.73	464.05		489.92	464.10		488.79	462.50
2		491.50	463.57		490.57	464.50		489.92	464.18		488.70	462.80
3		491.47	464.35								488.66	462.75
4		491.44	464.45					489.88	463.20		488.65	462.74
5		491.42	464.45		490.60	463.50		489.81	463.95		488.61	462.72
6		491.40	464.05		490.58	464.25		489.79	463.90		488.61	462.61
7					490.55	464.50		489.71	463.90			
8		491.55	463.75		490.50	464.45		489.67	464.05		488.79	461.70
9		491.30	464.50		490.48	464.39		489.67	464.10		488.55	462.78
10		491.25	464.67		490.52	464.29					488.51	462.93
11		491.25	464.77					489.65	463.00		488.48	462.90
12		491.13	465.05		490.47	463.50		489.55	463.58		488.45	462.90
13		491.08	465.12		490.45	464.28		489.50	463.67	2	488.59	463.00
14					490.41	464.25		489.49	463.67			
15		491.19	464.00		490.38	464.20		489.45	463.71		488.80	462.36
16		491.10	464.65		490.33	464.15		489.42	463.60		488.69	462.95
17		491.01	464.80		490.32	463.97					488.71	462.90
18		490.98	464.87		490.60	463.40					488.80	462.85
19		490.95	464.90		490.30	462.90		489.33	463.10		488.77	462.85
20		490.90	464.95		490.25	463.65		489.25	463.58		488.78	462.85
21					490.17	463.80		489.21	463.58			
22		490.95	463.60		490.14	463.90		489.18	463.65		488.96	462.00
23		490.80	464.70		490.17	463.80		489.15	463.55		488.83	462.70
24		490.78	464.85		490.12	463.80					488.85	462.77
25		490.78	464.80					489.13	462.80		488.73	462.90
26		490.75	464.75		490.10	463.55		489.00	463.25		488.75	463.20
27		490.73	464.70		490.05	463.90		488.95	463.30		488.76	463.45
28					490.00	463.85		488.89	463.25			
29		490.84	463.10		489.97	464.10		488.85	463.05		489.22	462.75
30		490.78	464.05					488.92	462.95		489.10	463.70
31		490.75	464.08									

1. Average waste for September 31 c. f. s.

2. 489.66 Rainy Lake.

TABLE 36—Continued

WATER LEVELS—RAINY RIVER—INTERNATIONAL FALLS, MINN.

RECORDS OF MINNESOTA & ONTARIO POWER CO. REFERRED TO PUBLIC WORKS (CANADA) DATUM

1912	May			June			July			August	
	Footnote	Head Water	Tail Water	Footnote	Head Water	Tail Water	Footnote	Head Water	Tail Water	Footnote	Head Water	Tail Water
1		489.23	463.83		492.31	463.60	1	495.05	462.00	2	495.74	465.55
2		489.33	463.85					495.10	462.15		495.74	465.55
3		489.40	463.85		492.35	463.45		495.17	463.05		495.70	465.60
4		489.43	463.92		492.57	463.42						
5					492.63	463.50		495.30	462.48		495.70	465.10
6		489.67	463.52		492.88	463.45		495.27	462.90		495.75	465.05
7		489.64	464.30		492.97	463.45					495.70	465.40
8		489.72	464.70		493.07	463.42		495.45	462.55		495.75	465.35
9		489.83	464.80					495.40	463.40		495.72	465.30
10		489.90	464.95		493.20	463.10		495.45	463.60		495.72	465.25
11		490.03	464.80		493.37	463.35		495.45	464.20			
12					493.47	463.30		495.47	464.20		495.72	464.65
13					493.60	463.25		495.50	464.32		495.73	464.40
14		490.35	464.67		493.72	463.20					495.74	464.50
15		490.47	464.75		493.81	463.18		495.57	463.75		495.71	464.45
16		490.47	464.88					495.50	464.50		495.80	463.60
17		490.77	464.69		493.90	462.90		495.50	464.70		495.90	463.65
18		490.87	464.48		494.05	463.10		495.53	464.70			
19					494.10	463.15		495.69	463.60		495.78	463.65
20		491.01	463.62		494.23	463.16		495.73	463.65		495.73	464.40
21		491.07	464.24		494.27	463.20					495.72	464.40
22		491.19	464.18		494.32	463.35		495.69	464.40		495.75	463.80
23		491.19	464.30					495.74	464.70		495.76	463.50
24		491.35	464.35		494.52	462.80		495.70	464.70		495.83	463.50
25		491.43	464.30		494.65	463.15		495.70	464.75			
26					494.63	463.05		495.72	464.80		495.83	463.35
27		491.77	462.91		494.70	463.00		495.70	464.80		495.83	463.35
28		491.99	463.64		494.75	462.85					495.94	463.30
29		491.97	463.72		494.80	462.90		495.70	465.40		495.88	463.80
30		492.13	463.68		495.00	462.35		495.77	465.55		495.92	463.65
31		492.23	463.50					495.74	465.55		495.92	463.60

1912	September			October			November			December	
	Footnote	Head Water	Tail Water	Footnote	Head Water	Tail Water	Footnote	Head Water	Tail Water	Footnote	Head Water	Tail Water
1	3			4	495.85	464.30		495.65	463.80			
2		495.90	463.00		495.85	464.20		495.66	463.75		495.00	464.40
3		495.94	463.00		495.83	464.10					494.98	464.80
4		495.88	464.30		495.88	464.08		495.65	463.30		495.05	465.00
5		495.91	464.50		495.87	464.00		495.65	463.80		494.95	464.80
6		495.80	464.70					495.60	463.85		494.95	465.05
7		495.75	464.75		495.85	463.58		495.55	463.90		494.95	464.85
8					495.85	463.80		495.40	463.75			
9		495.83	464.00		495.93	463.96		495.57	463.80		494.90	464.25
10		495.77	464.70		495.90	464.00					494.78	465.20
11		495.83	464.50		495.92	463.90		495.54	463.20		494.55	465.60
12		495.83	464.45		495.85	463.95		495.55	463.40		494.75	465.60
13		495.84	464.35					495.52	463.70		494.55	465.60
14		495.80	464.30		495.87	463.75		495.45	463.85		494.65	465.30
15					495.88	463.88		495.47	463.55			
16		495.80	463.80		495.85	463.90		495.37	463.90		494.35	464.50
17		495.80	463.00		495.86	463.80					494.65	465.10
18		495.74	464.42		495.83	463.80		495.40	463.65		494.58	465.20
19		495.78	463.85		495.75	463.90		495.30	463.90		494.57	465.10
20		495.87	463.65					495.34	463.80		494.55	465.20
21		495.81	463.58		495.87	462.75		495.24	463.90		494.52	465.20
22					495.79	463.65		495.24	463.90			
23		495.75	463.00		495.77	463.75		495.25	463.85		494.54	464.10
24		495.94	463.40		495.73	463.70					494.53	464.50
25		495.94	463.70		495.73	463.75		495.22	463.20			
26		495.70	465.20		495.72	463.65		495.21	463.75		494.55	463.70
27		495.70	465.15					495.09	463.80		494.50	464.32
28		495.87	464.48		495.75	462.90		495.08	463.90		494.45	464.73
29					495.69	463.65		494.93	463.90			
30		495.80	464.25		495.67	463.75		495.03	463.60		494.47	463.60
31					495.66	463.85					494.38	464.56

1. Average waste for July 1600 c. f. s.
2. Average waste for August 1846 c. f. s.
3. Average waste for September 1020 c. f. s.
4. Average waste for October 50 c. f. s.

TABLE 36—Continued

WATER LEVELS—RAINY RIVER—INTERNATIONAL FALLS, MINN.

RECORDS OF MINNESOTA & ONTARIO POWER CO REFERRED TO PUBLIC WORKS (CANADA) DATUM

1913	JANUARY			FEBRUARY			MARCH			APRIL		
	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water
1		494.42	464.85		493.33	465.80		492.27	465.72		490.96	464.45
2		494.35	464.80		493.54	464.59		492.45	464.92		491.07	464.25
3		494.27	464.92		493.36	464.04		492.08	464.95		491.10	463.82
4		494.25	465.10		493.17	465.51		492.06	465.80		491.00	464.00
5		494.35	464.30		493.17	465.67		492.00	465.80		490.95	464.02
6		494.17	464.12		493.13	465.72		492.01	465.90		491.12	463.48
7		494.16	465.10		493.07	465.70		491.96	465.93		491.06	462.88
8		494.15	465.12		493.05	465.68		491.90	465.85		490.72	463.82
9		494.13	465.21		493.20	465.05		492.10	465.09		490.68	463.98
10		494.07	465.24		493.05	464.33		491.82	464.79		490.65	463.99
11		494.05	465.40		492.95	465.63		491.82	465.43		490.64	464.04
12		494.10	464.58		492.90	465.80		491.75	465.29		490.63	464.11
13		493.98	464.60		492.85	465.79		491.76	465.35		491.00	463.50
14		493.95	465.29		492.85	465.82		491.71	464.98		490.70	463.63
15		493.90	465.38		492.77	465.85		491.65	465.60		490.66	464.85
16		493.87	465.35		492.90	464.85		491.97	464.41		490.75	465.75
17		493.84	465.23		492.85	464.45		491.71	464.41		490.73	465.84
18		493.80	465.50		492.76	465.60		491.56	465.08		490.81	464.88
19		493.86	464.73		492.65	465.79		491.54	465.20		490.85	465.89
20		493.77	464.29		492.64	465.80		491.47	465.51		491.25	465.29
21		493.70	465.35		492.58	465.80		491.44	465.59		490.94	465.33
22		493.67	465.51		492.50	465.70		491.37	465.70		490.93	465.40
23		493.60	465.53		492.67	465.20		491.65	464.69		490.97	465.21
24		493.60	465.61		492.60	464.50		491.38	464.26		490.97	465.20
25		493.65	465.59		492.40	465.69		491.26	465.25		491.05	465.33
26		493.74	464.72		492.35	465.80		491.23	465.35		491.06	465.70
27		493.60	464.01		492.31	465.90		491.17	465.36		491.46	465.60
28		493.53	465.43		492.30	465.78		491.15	465.29		491.20	465.80
29		493.43	465.63					491.15	465.17		491.20	466.00
30		493.42	465.55					491.48	464.00		491.21	465.80
31		493.36	465.73					491.15	463.77			

1913	MAY			JUNE			JULY			AUGUST		
	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water
1	1	491.25	465.51	2			3	496.46	466.95	4	496.83	466.28
2		491.30	465.20		494.01	464.80		496.54	466.93		496.75	466.19
3		491.30	465.19		494.15	465.22		496.37	467.10			
4					494.19	465.20					496.83	465.80
5		491.46	465.21		494.45	465.00		496.70	466.40		496.90	465.30
6		491.52	465.65		494.63	465.01		496.72	466.80		496.87	465.28
7		491.57	465.69		494.80	465.28		496.76	467.22		496.81	465.50
8		491.65	465.61					496.75	467.00		496.70	465.90
9		491.66	465.42		495.02	465.70		496.84	466.90		496.80	465.80
10		491.73	465.19		495.10	465.90		496.65	467.60			
11					495.20	465.50		496.65	467.60		496.72	465.60
12		491.70	464.50		495.35	465.30		496.74	467.70		496.78	465.43
13		491.87	464.53		495.55	465.02					496.80	465.38
14		492.00	464.54		495.58	464.80		496.74	468.40		496.88	465.40
15		492.05	464.54					496.70	468.70		496.85	465.38
16		492.05	464.53		495.74	464.60		496.70	468.70		496.84	465.41
17		492.15	464.95		495.96	464.63		496.67	469.10			
18					496.00	464.60		496.66	469.20		496.86	465.20
19		492.40	464.49		496.05	464.65		496.66	469.00		496.85	465.30
20		492.45	465.70		496.17	464.55					496.78	465.38
21		492.64	465.42		496.20	465.50		496.54	468.60		496.76	465.45
22		492.65	465.30					496.82	468.20			
23		492.73	465.40		496.19	465.30		496.74	468.05		496.75	465.50
24		492.85	465.44		496.35	465.50		496.70	468.00			
25					496.35	465.40		496.73	467.90		496.75	464.40
26		493.04	464.95		496.43	465.40		496.74	467.80		496.85	464.10
27		493.12	465.05		496.65	465.38					496.75	464.00
28		493.27	464.88		496.64	465.50		496.70	467.40		496.75	464.00
29		493.53	464.60		496.55	466.60		496.65	467.50		496.75	463.90
30		493.65	464.70		496.45	466.48		496.67	467.40		496.85	463.80
31		493.72	464.88					496.75	466.50			

1. Average waste for May, 11 c. f. s.
2. Average waste for June, 2,157 c. f. s.
3. Summary of average waste for July:

	c. f. s.
Canadian log sluice	1,322
American log sluice	71
Fishway	19
Canadian floodgates	5,409
American floodgates	1,871
Total average waste	8,692

4. Summary of average waste for August:

	c. f. s.
Canadian log sluice	992.52
American log sluice	71.65
Fishway	21.36
Canadian floodgates	3,468.57
American floodgates	0.00
American grinder room	32.26
Total average waste	4,587.36

TABLE 36—Continued

WATER LEVELS—RAINY RIVER—INTERNATIONAL FALLS, MINN.

RECORDS OF MINNESOTA & ONTARIO POWER CO. REFERRED TO PUBLIC WORKS (CANADA) DATUM

1913	September			October			November			December	
	Footnote	Head Water	Tail Water	Footnote	Head Water	Tail Water	Footnote	Head Water	Tail Water	Footnote	Head Water	Tail Water
1	1	496.89	462.60	2	496.45	463.50	3	496.35	463.70	....	496.14	464.38
2	....	496.85	463.60	....	496.45	463.40	....	.....	.....	....	496.06	464.29
3	....	496.85	463.80	....	496.45	463.37	....	496.25	463.30	....	496.03	464.43
4	....	496.75	463.90	....	496.54	463.32	....	496.31	463.72	....	496.04	464.32
5	....	496.85	463.90	....	.....	.....	....	496.24	463.78	....	496.09	463.94
6	....	496.85	463.90	....	496.60	463.42	....	496.33	463.68	....	495.97	464.25
7	....	.....	.....	....	496.55	463.85	....	496.31	463.68	....	.....	.....
8	....	496.78	464.03	....	496.61	464.11	....	496.32	463.79	....	495.99	464.94
9	....	496.79	464.05	....	496.60	464.40	....	.....	.....	....	495.94	465.70
10	....	496.81	464.00	....	496.54	464.50	....	496.38	463.42	....	495.94	465.72
11	....	496.77	463.90	....	496.43	464.88	....	496.23	463.60	....	495.93	465.55
12	....	496.75	464.00	....	.....	.....	....	496.20	463.50	....	495.86	465.40
13	....	496.78	464.02	....	496.63	464.15	....	496.16	463.62	....	495.91	465.38
14	....	.....	.....	....	496.55	464.80	....	496.24	463.62	....	.....	.....
15	....	496.74	463.89	....	496.45	465.00	....	496.23	463.60	....	495.91	464.54
16	....	496.75	464.01	....	496.55	464.75	....	.....	.....	....	495.84	465.00
17	....	496.65	464.03	....	496.60	464.80	....	496.22	463.29	....	495.82	464.90
18	....	496.60	463.98	....	496.45	464.58	....	496.21	463.60	....	495.79	465.00
19	....	496.70	463.90	....	.....	.....	....	496.20	463.56	....	495.77	465.03
20	....	496.65	463.88	....	496.50	464.30	....	496.22	463.52	....	495.76	465.19
21	....	.....	.....	....	496.75	464.60	....	496.21	463.44	....	.....	.....
22	....	496.60	463.85	....	496.45	464.50	....	496.19	463.65	....	495.77	464.13
23	....	496.57	463.69	....	496.45	464.45	....	.....	.....	....	495.75	464.70
24	....	496.57	463.60	....	496.40	464.40	....	496.18	463.50	....	495.73	464.78
25	....	496.55	463.59	....	496.45	464.30	....	496.14	464.20	....	.....	.....
26	....	.....	.....	....	.....	.....	....	496.15	464.19	....	495.75	463.98
27	....	496.50	463.47	....	496.15	463.80	....	496.07	461.23	....	495.71	464.70
28	....	496.48	463.46	....	496.35	463.90	....	496.10	464.20	....	.....	.....
29	....	.....	.....	....	496.35	463.80	....	496.08	464.10	....	495.66	464.50
30	....	496.56	463.38	....	496.35	463.80	....	.....	.....	....	495.65	464.85
31	....	496.45	463.50	....	496.25	463.80	....	.....	.....	....	495.65	464.90

1914	January			February			March			April	
	Footnote	Head Water	Tail Water	Footnote	Head Water	Tail Water	Footnote	Head Water	Tail Water	Footnote	Head Water	Tail Water
1	....	495.61	465.30	....	.....	.....	....	.....	.....	....	492.74	464.00
2	....	495.50	465.37	....	494.78	464.60	....	493.87	465.11	....	492.72	464.02
3	....	495.51	465.25	....	494.75	465.40	....	493.87	465.11	....	492.65	464.08
4	....	.....	.....	....	494.72	465.65	....	493.80	465.35	....	492.63	464.01
5	....	495.49	464.50	....	494.71	465.80	....	493.75	465.20	....	.....	.....
6	....	495.42	465.05	....	494.65	465.79	....	493.75	465.09	....	492.54	463.72
7	....	495.41	465.08	....	494.60	465.90	....	493.70	465.08	....	492.50	464.00
8	....	495.42	465.00	....	.....	.....	....	.....	.....	....	492.45	464.00
9	....	495.35	464.90	....	494.53	465.00	....	493.60	464.45	....	492.40	464.00
10	....	495.33	465.00	....	494.52	465.70	....	493.55	464.09	....	492.34	464.03
11	....	.....	.....	....	494.45	465.80	....	493.53	465.00	....	492.26	464.20
12	....	495.43	464.78	....	494.40	465.91	....	493.45	464.93	....	.....	.....
13	....	495.25	465.40	....	494.40	465.92	....	493.44	464.92	....	492.27	463.75
14	....	495.24	465.35	....	494.38	466.00	....	493.40	464.70	....	492.16	463.98
15	....	495.21	465.20	....	.....	.....	....	.....	.....	....	492.14	464.09
16	....	495.16	464.85	....	494.34	465.50	....	493.35	464.28	....	492.15	464.10
17	....	495.13	465.05	....	494.27	465.83	....	493.35	464.45	....	492.20	464.25
18	....	.....	.....	....	494.25	465.90	....	493.25	464.50	....	492.20	464.62
19	....	495.11	464.00	....	494.23	465.95	....	493.24	464.50	....	.....	.....
20	....	495.11	464.50	....	494.17	465.95	....	493.16	464.51	....	492.30	464.90
21	....	495.05	465.18	....	494.15	465.88	....	493.15	464.45	....	492.18	465.19
22	....	495.03	465.45	....	.....	.....	....	.....	.....	....	492.28	465.05
23	....	494.99	465.28	....	494.10	465.38	....	493.05	464.00	....	492.33	465.00
24	....	494.96	465.50	....	494.05	465.78	....	493.01	464.32	....	492.26	465.01
25	....	.....	.....	....	494.04	465.80	....	493.01	464.05	....	492.25	465.01
26	....	495.03	464.09	....	493.95	465.65	....	492.95	464.30	....	.....	.....
27	....	494.89	465.50	....	493.96	465.60	....	492.94	464.28	....	492.30	464.27
28	....	494.93	465.53	....	493.83	465.40	....	492.87	464.30	....	492.35	464.80
29	....	494.83	465.50	....	.....	.....	....	.....	.....	....	492.42	465.00
30	....	494.80	465.01	....	.....	.....	....	492.85	463.70	....	492.35	465.50
31	....	494.76	465.61	....	.....	.....	....	492.77	464.00	....	.....	.....

1. Summary of average waste for September:

	c. f. s.
American log sluice	13.11
(Elevation of sill, 495.17.)	
Fishway open all month	19.32
(Elevation of sill, 495.18.)	
Total average waste	32.43

2. Summary of average waste for October:

	c. f. s.
Canadian log sluice	20.61
Fishway	15.52
(Elevation of sill, 495.18.)	
Total average waste	36.13

3. American log sluice (elevation of sill, 495.17), average waste, 0.75 c. f. s.

*TABLE 36—Continued

WATER LEVELS—RAINY RIVER—INTERNATIONAL FALLS, MINN.

RECORDS OF MINNESOTA & ONTARIO POWER CO. REFERRED TO PUBLIC WORKS (CANADA) DATUM

1914	May			June			July			August		
	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water
1		492.35	465.90	1	494.05	465.40	2	496.30	465.30	3	496.94	465.88
2		492.37	466.40		494.15	465.75		496.40	465.00			
3					494.20	465.68		496.45	465.30		496.90	464.90
4		492.52	466.79		494.30	465.50					496.90	465.70
5		492.63	467.15		494.40	465.40					496.79	465.70
6		492.66	467.25		494.40	465.40		496.70	464.40		496.60	465.65
7		492.72	467.10					496.60	465.90		496.82	465.70
8		492.72	467.00		494.45	464.70		496.75	465.55		496.65	465.70
9		492.72	466.68		494.58	465.40		496.70	465.90			
10					494.70	466.45		496.70	465.73		496.80	464.78
11		492.85	466.72		494.83	467.25		496.90	465.90		496.78	465.70
12		492.87	465.90		494.83	467.25					496.70	465.70
13		492.87	465.70		494.95	467.10		496.95	465.85		496.65	465.70
14		492.94	465.55					497.00	467.30		496.60	465.75
15		492.95	465.40		495.15	465.25		497.05	467.85		496.75	465.70
16		492.96	465.20		495.10	465.90		496.90	467.80			
17					495.20	465.70		497.08	467.32		496.69	465.20
18		493.02	464.68		495.32	465.50		497.00	467.20		496.65	465.60
19		493.10	464.90		495.35	465.50					496.60	465.60
20		493.30	465.39		495.43	465.42		497.09	466.00		496.55	465.70
21		493.40	466.60					497.12	466.50		496.50	465.65
22		493.63	466.90		495.60	464.50		497.10	466.50		496.60	465.60
23		493.57	466.60		495.65	465.15		497.03	467.20			
24					495.65	465.08		497.00	467.00		496.54	464.60
25		493.60	466.20		495.65	465.08		496.98	466.98		496.52	465.30
26		493.55	466.50		495.90	465.28					496.50	465.68
27		493.67	465.95		c496.70	465.00		496.93	466.55		496.45	465.70
28		493.75	465.70					497.01	466.70		496.48	465.70
29		493.75	466.05		496.15	464.20		496.94	466.70		496.40	465.72
30		493.93	466.18		496.30	465.05		497.00	466.30			
31								496.90	466.00		496.40	465.70

1914	September			October			November			December		
	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water
1	4	496.32	465.48	5	496.30	465.68	6				495.12	465.55
2		496.18	465.73		496.20	465.90		496.15	464.90		495.05	465.90
3		496.16	465.80		496.30	465.48		495.85	465.90		495.10	465.90
4		496.18	465.80					495.80	466.20		495.01	465.85
5		496.20	465.72		496.23	465.05		495.90	466.04		495.10	465.62
6					496.25	465.65		495.93	466.10			
7					496.25	465.70		495.65	466.05		495.00	464.10
8		496.25	464.79		496.20	465.75					494.85	465.50
9		496.20	465.50		496.25	465.72		495.83	465.10		494.85	465.78
10		496.20	465.73		496.30	465.69		495.75	465.90		494.85	466.00
11		496.20	465.65					495.74	466.00		494.90	466.10
12		496.19	465.65		496.30	465.10		495.70	466.00		494.70	466.20
13					496.25	465.90		495.68	465.70			
14		496.08	465.00		496.25	466.17		495.75	465.70		494.65	464.20
15		496.00	465.60		496.20	465.92					494.60	466.45
16		496.10	465.80		496.22	465.86		495.40	464.60		494.65	466.75
17		496.18	465.90		496.25	465.80		495.85	464.50		494.70	466.60
18		496.13	466.00					495.40	465.90		494.60	466.50
19		496.15	466.00		496.20	464.58		495.50	466.40		494.50	466.40
20					496.20	465.75		495.50	466.80			
21		496.20	465.10		496.15	465.90		495.33	466.90		494.60	464.50
22		496.12	465.90		496.26	465.89					494.50	465.00
23		496.25	465.92		496.20	466.00		495.42	465.60		494.45	465.40
24		496.20	465.96		496.20	466.01		495.21	466.75		494.40	466.70
25		496.23	466.01					495.30	466.58			
26		496.20	466.01		496.00	465.20		495.20	466.50		494.72	463.40
27					496.14	465.90		495.38	465.95			
28		496.32	465.10		496.10	466.10		495.40	465.40		494.45	464.50
29		496.30	465.80		496.00	466.20					494.40	466.25
30		496.30	465.90		496.08	466.18		495.40	463.40		494.25	466.75
31					496.08	466.08					494.20	466.80

1. Summary of average waste for June:

	c. f. s.
American log sluice	0.10
Canadian canal gate	45.86
Total average waste	45.96

2. Summary of average waste for July:

	c. f. s.
Canadian log sluice	578.20
American log sluice	53.02
Canadian flood gate	74.42
Canadian canal gate	537.83
Overflow	5.21
Total average waste	1,248.68

3. Summary of average waste for August:

	c. f. s.
Canadian log sluice	66.04
Canadian canal gate	35.08
Total average waste	101.12

4. Canadian canal gate, average waste.... 34.72

5. Summary of average waste for October:

	c. f. s.
Canadian log sluice	6.84
Canadian canal gate	34.66
Total average waste	41.50

6. Summary of average waste for November:

	c. f. s.
Canadian canal gate (part month)	27.89
Canadian canal gate (part month)	16.63
Total average waste	44.52

* For 1915 records see page 313.

TABLE 37

WATER LEVELS—RAINY RIVER—INTERNATIONAL FALLS, MINN.—U. S. G. S. GAUGE ON DOCK

RECORDS OF UNITED STATES GEOLOGICAL SURVEY

1911

Date	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1					−0.31	2.30	0.64	2.55	2.71	1.60	1.58	3.30
2					0.55	2.24	−0.50	2.54	2.70	0.95	1.60	3.25
3					0.68	2.24	−1.00	2.70	2.70	1.70	1.50	2.80
4					0.62	0.85	−1.00	2.65	2.36	1.85	1.25	2.66
5					0.64	0.85	0.35	2.45	2.46	1.85	0.68	3.14
6					0.64	2.60	0.78	1.35	2.64	1.90	1.00	3.08
7					−0.01	2.68	0.70	2.35	2.54	1.75	1.35	2.94
8					−0.13	2.66	0.75	2.60	2.60	1.32	1.32	2.96
9					0.72	2.62	0.55	2.64	2.50	1.08	1.40	3.09
10					0.94	3.20	0.60	2.74	2.36	1.38	1.68	2.45
11					1.66	1.20	0.90	2.85	2.40	1.84	1.25	2.12
12					1.60	2.65	0.65	2.84	2.40	1.89	2.16	2.60
13					0.95	3.90	0.70	0.62	2.36	1.88	2.69	2.65
14					−0.27	4.04	0.74	2.55	2.36	1.69	3.01	2.65
15					0.76	4.12	0.90	2.85	2.40	0.95	3.20	2.58
16					1.22	3.98	0.30	2.74	2.09	1.00	3.18	2.48
17					2.11	3.15	0.61	2.74	1.35	1.58	3.22	1.98
18				1.26	1.51	1.00	0.64	2.94	1.21	1.78	3.25	1.52
19				1.01	1.98	1.24	0.53	2.80	2.00	1.89	1.60	2 42
20				1.08	1.92	2.66	−0.04	1.95	2.15	2.04	2.31	2.56
21				0.95	−0.25	2.90	−0.08	2.40	2.00	1.75	3.25	2.50
22				0.94	1.06	2.84	−0.08	2.74	1.72	1.19	3.35	2.48
23				0.30	2.06	2.38	.....	2.74	2.01	1.00	3.35	2.41
24				0.52	2.16	1.80	.....	2.92	1.25	1.05	3.50	0.95
25				0.58	2.18	1.80	0.72	2.72	0.61	1.75	3.68	0.10
26				0.40	1.85	1.61	2.11	2.88	1.70	1.84	3.08	1.85
27				0.30	2.13	1.70	2.31	1.92	1.70	1.92	2.10	3.38
28				0.16	−0.01	1.65	2.52	2.40	1.82	1.84	3.08	3.65
29				0.04	0.78	1.49	2.68	2.55	1.90	1.48	3.22	3.70
30				−0.29	2.10	0.75	0.31	2.71	1.92	0.90	3.28	3.48
31				.....	2.26	.....	1.41	2.70	.....	1.40	.....	2.55

1912

Date												
1	1.7	3.1	3.1	1.4	3.0	2.6	1.7	4.6	2.4	3.4	2.8	2.8
2	3.0	3.6	3.1	1.8	2.9	2.2	2.0	4.7	2.1	3.3	2.8	3.6
3	3.4	3.9	2.5	1.8	2.8	2.5	2.0	4.7	2.5	3.2	2.2	4.0
4	3.4	3.0	2.4	1.85	3.9	2.5	1.65	4.2	3.5	3.1	2.1	4.0
5	3.4	2.8	3.0	1.7	2.4	2.5	1.8	4.1	3.6	3.2	2.9	4.0
6	3.4	3.3	3.0	1.6	2.5	2.5	2.0	4.3	3.8	2.7	2.9	4.0
7	3.0	3.5	2.9	0.55	3.5	2.5	1.55	4.5	3.6	2.8	2.9	3.8
8	2.5	3.4	3.0	1.1	3.9	2.4	1.9	4.4	3.4	2.9	2.9	3.4
9	3.4	3.4	3.1	1.7	3.8	2.1	2.6	4.3	3.4	3.0	2.8	3.4
10	3.7	3.3	2.4	2.0	4.0	2.2	2.8	4.3	3.7	3.0	2.2	4.3
11	3.8	2.8	2.2	2.0	3.9	2.4	3.3	3.8	3.6	3.0	2.2	4.4
12	4.1	2.8	2.8	2.0	3.1	2.4	3.2	3.6	3.4	3.1	2.6	4.5
13	4.2	3.4	2.7	2.0	2.8	2.3	3.3	3.5	3.4	2.5	2.8	4.5
14	2.0	3.4	2.7	1.5	3.7	2.3	2.9	3.5	3.4	2.8	2.8	4.4
15	3.1	3.3	2.8	1.3	3.9	2.2	3.0	3.4	2.8	2.9	2.8	3.6
16	3.7	3.2	2.6	2.1	3.9	1.9	3.6	2.7	3.0	2.9	2.7	3.4
17	3.9	3.0	1.8	1.9	3.8	2.0	3.8	3.0	3.2	2.8	2.2	4.2
18	3.9	2.3	1.7	1.85	3.6	2.1	3.4	2.9	3.0	2.8	2.4	4.3
19	3.9	2.1	2.2	1.85	2.6	2.1	2.7	3.1	2.7	2.9	2.8	4.4
20	4.0	2.7	2.6	1.9	2.5	2.2	3.2	3.5	2.7	2.5	2.8	4.4
21	3.2	2.9	2.6	1.05	3.3	2.2	3.6	3.3	2.4	2.2	3.0	4.2
22	3.0	2.9	2.7	0.9	3.2	2.4	3.6	2.8	2.3	2.7	2.9	3.3
23	3.8	2.9	2.6	1.75	3.2	2.0	3.8	2.6	2.3	2.8	2.8	3.2
24	3.9	2.8	1.7	1.9	3.3	2.0	3.9	2.7	2.6	2.8	2.3	3.4
25	3.8	2.2	1.9	2.0	3.0	2.2	3.9	2.3	3.2	2.8	2.3	3.0
26	3.8	2.4	2.2	2.2	1.9	2.0	3.9	2.6	4.4	2.8	2.7	2.8
27	3.6	3.0	2.3	2.4	2.1	2.0	3.9	2.4	4.0	2.1	2.8	3.5
28	2.7	3.1	2.2	1.9	2.7	1.9	3.8	2.6	3.5	2.1	2.8	3.2
29	2.3	3.1	2.0	1.9	2.7	1.9	4.6	2.6	3.2	2.7	2.8	3.2
30	3.2	.....	1.9	2.8	2.6	1.5	4.6	2.8	3.4	2.8	2.7	3.1
31	3.2	.....	1.3	.....	2.6	.....	4.6	2.7	.....	2.8	.....	3.8

TABLE 37—Continued

WATER LEVELS—RAINY RIVER—INTERNATIONAL FALLS, MINN.—U. S. G. S. GAUGE ON DOCK

RECORDS OF UNITED STATES GEOLOGICAL SURVEY

Date	1913											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	3.9	4.8	4.8	3.5	4.5	3.8	6.1	5.2	1.7	2.5	2.7	2.8
2	3.9	3.8	4.1	3.2	4.3	3.8	6.2	5.2	2.7	2.5	2.5	3.4
3	4.0	3.7	4.0	3.0	4.2	4.3	6.4	4.9	2.8	2.4	2.6	3.6
4	4.2	4.6	4.9	3.2	3.9	4.2	6.0	4.7	2.9	2.3	2.8	3.3
5	3.2	4.8	4.9	3.1	4.4	4.0	5.6	4.4	2.9	2.3	2.8	3.0
6	3.2	4.8	5.0	2.4	4.7	4.2	6.2	4.4	2.9	2.5	2.8	3.2
7	4.1	4.8	5.0	2.1	4.8	4.4	6.3	4.7	2.8	3.0	2.7	2.8
8	4.2	4.7	4.9	2.8	4.7	4.6	6.2	4.9	3.0	3.3	2.7	.....
9	4.2	4.2	4.6	3.1	4.5	4.9	6.3	4.9	3.0	3.5	2.0	.....
10	4.3	4.1	3.9	3.0	4.2	4.9	6.8	4.2	3.0	3.6	1.8	4.8
11	4.5	4.8	4.4	3.1	3.6	4.6	7.0	4.3	3.0	4.0	2.5	4.6
12	3.7	4.8	4.3	3.2	3.6	4.3	7.2	4.6	3.1	3.7	2.6	4.5
13	3.6	4.9	4.2	2.7	3.7	4.1	7.3	4.6	3.1	3.6	2.7	4.4
14	4.3	4.9	4.1	2.8	3.6	4.0	7.6	4.5	2.6	4.0	2.7	3.6
15	4.4	4.9	4.6	4.1	3.6	3.7	7.8	4.5	2.6	4.0	2.7	3.6
16	4.4	4.2	3.5	4.8	3.7	3.9	7.7	4.5	3.0	3.9	2.2	4.1
17	4.4	3.9	3.6	4.9	4.1	3.9	8.2	4.2	3.0	3.7	2.3	4.0
18	4.5	4.7	4.2	5.0	4.4	3.9	8.4	4.3	2.9	3.6	2.6	4.0
19	3.6	4.8	4.5	5.0	4.6	3.8	8.4	4.5	2.9	2.8	2.6	4.1
20	3.6	4.8	4.7	4.4	4.7	4.0	7.9	4.6	2.9	3.3	2.6	4.3
21	4.4	4.8	4.6	4.3	4.5	4.3	7.6	4.6	2.7	3.4	2.5	4.1
22	4.6	4.8	4.6	4.4	4.4	4.4	7.5	4.6	2.7	3.4	2.8	3.3
23	4.6	4.4	3.8	4.3	4.5	4.4	7.3	4.6	2.7	3.3	2.5	3.8
24	4.7	4.1	3.6	4.3	4.6	4.5	7.3	4.1	2.6	3.3	2.8	3.9
25	4.6	4.8	4.3	4.5	4.2	4.6	7.2	3.6	2.6	3.3	3.2	3.4
26	4.0	5.0	4.4	4.9	4.0	4.6	7.0	3.2	2.6	2.9	3.3	3.1
27	3.6	5.0	4.4	4.7	4.1	4.6	6.7	3.0	2.5	2.9	3.3	3.8
28	4.5	4.9	4.3	4.9	3.9	4.9	6.7	3.0	2.4	2.8	3.3	3.5
29	4.7	.....	4.2	5.0	3.7	5.7	6.7	2.9	2.5	2.8	3.1	3.6
30	4.6	.....	3.2	4.8	3.7	6.0	6.2	2.8	2.5	2.8	2.6	3.9
31	4.8	.....	2.9	.....	4.1	.....	5.7	1.7	.....	2.8	.....	4.1

Date	1914											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	4.3	3.9	4.2	3.1	5.0	4.6	4.1	4.8	.....	.....	.....	.....
2	4.4	3.8	4.2	3.1	5.4	4.8	4.1	4.0	.....	.....	.....	.....
3	4.3	4.6	4.4	3.1	5.6	4.7	4.4	4.1	.....	.....	.....	.....
4	3.7	4.8	4.2	3.1	6.0	4.5	3.7	4.7	.....	.....	.....	.....
5	3.6	4.8	4.3	2.6	6.3	4.4	2.6	4.8	.....	.....	.....	.....
6	4.2	4.9	4.2	2.7	6.3	4.3	3.7	4.8	.....	.....	.....	.....
7	4.1	5.0	4.1	3.0	6.2	3.5	4.8	4.9	.....	.....	.....	.....
8	4.0	4.7	3.5	3.1	6.0	3.8	4.7	4.8	.....	.....	.....	.....
9	4.0	4.5	3.6	3.1	5.8	4.6	4.9	3.9	.....	.....	.....	.....
10	4.1	4.8	4.0	3.1	5.0	5.9	4.8	4.2	.....	.....	.....	.....
11	3.5	4.9	4.0	3.2	4.9	6.3	4.9	4.7	.....	.....	.....	.....
12	4.1	5.1	4.0	2.5	4.9	6.2	4.2	4.8	.....	.....	.....	.....
13	4.5	5.0	3.9	2.7	4.8	6.1	4.8	4.8	.....	.....	.....	.....
14	4.4	5.0	3.8	3.0	4.6	5.3	6.5	4.8	.....	.....	.....	.....
15	4.3	4.5	2.8	3.1	4.4	4.5	6.9	4.8	.....	.....	.....	.....
16	4.0	4.7	3.4	3.2	4.2	4.9	6.8	4.4	.....	.....	.....	.....
17	4.1	4.9	3.6	3.3	3.8	4.8	6.5	3.6	.....	.....	.....	.....
18	3.5	4.9	3.6	3.8	3.8	4.8	6.3	4.6	.....	.....	.....	.....
19	3.1	5.0	3.6	3.6	4.0	4.5	5.6	4.7	.....	.....	.....	.....
20	3.6	5.0	3.6	4.0	4.7	4.4	5.4	4.7	.....	.....	.....	.....
21	4.3	4.9	3.5	4.3	5.8	3.4	5.7	4.7	.....	.....	.....	.....
22	4.5	4.3	3.0	4.1	6.0	3.5	6.0	4.6	.....	.....	.....	.....
23	4.4	4.4	3.1	4.1	5.8	4.0	6.2	3.8	.....	.....	.....	.....
24	4.5	4.8	3.4	4.0	5.0	4.1	6.0	4.0	.....	.....	.....	.....
25	4.0	4.8	3.3	4.1	5.0	4.2	6.0	(*)	.....	.....	.....	.....
26	3.7	4.8	3.3	3.9	5.1	4.2	5.6	.....	.....	.....	.....	.....
27	4.4	4.7	3.3	3.8	5.0	4.1	5.6	.....	.....	.....	.....	.....
28	4.5	4.4	3.2	3.9	4.9	3.5	5.8	.....	.....	.....	.....	.....
29	.....	.....	2.7	4.1	5.2	3.4	5.8	.....	.....	.....	.....	.....
30	5.0	.....	2.9	4.6	5.3	4.2	5.4	.....	.....	.....	.....	.....
31	4.6	.....	3.1	.....	4.4	.....	5.1	.....	.....	.....	.....	.....

* Readings discontinued.

TABLE 38

WATER LEVELS—RAINY RIVER—FORT FRANCES, ONTARIO

RECORDS OF ONTARIO HYDRO-ELECTRIC POWER COMMISSION REFERRED TO PUBLIC WORK (CANADA) DATUM

[Gauge on Power Company's Cofferdam above Falls.]

1905	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1									491.5	490.8
2									491.5	490.8
3									491.45	490.8
4									491.4	490.8
5									491.4	490.8
6									491.4	490.8
7									491.4	490.8
8									491.4	490.8
9									491.3	490.8
10									491.3	490.7
11									491.3	490.7
12									491.3	490.7
13									491.3	490.7
14									491.2	490.7
15									491.2	490.7
16									491.2	490.7
17									491.2	490.7
18									491.2	490.7
19									491.1	490.7
20									491.0	490.7
21									490.9	490.7
22									490.9	490.7
23									490.9	490.7
24									490.9	.....
25								491.75	490.8	490.7
26								491.8	490.8	490.7
27								491.7	490.8	490.6
28								491.65	490.8	490.6
29								491.6	490.8	490.6
30								491.6	490.8	490.6
31								491.55	.....	490.6

1906	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.
1	490.6	490.0	489.1	488.5	490.5	491.9	492.8	492.3	491.0	489.5
2	490.6	489.9	489.1	488.4	490.6	491.9	492.8	492.3	491.0	489.4
3	490.6	489.9	489.1	488.4	490.6	491.8	492.8	492.3	490.9	489.3
4	490.6	489.8	489.1	488.4	490.7	491.8	492.9	492.2	490.8	489.3
5	490.6	489.8	489.1	488.3	490.7	491.9	492.9	492.2	490.7	489.2
6	490.6	489.8	489.0	488.3	490.8	492.0	492.9	492.1	490.6	489.2
7	490.6	489.8	489.0	488.3	490.9	492.0	492.9	492.1	490.6	489.2
8	490.6	489.7	489.0	488.3	491.0	492.1	492.9	492.0	490.6	489.0
9	490.6	489.7	489.0	488.3	491.0	492.2	492.9	492.0	490.5	488.9
10	490.6	489.7	489.0	488.3	491.1	492.2	492.9	491.9	490.5	488.9
11	490.6	489.7	488.9	488.3	491.0	492.2	492.6	491.9	490.4	488.9
12	490.6	489.6	488.9	488.3	491.2	492.3	492.8	491.8	490.4	488.9
13	490.6	489.6	488.9	488.3	491.2	492.3	492.9	491.8	490.3	488.8
14	490.6	489.6	488.9	488.6	491.2	492.2	492.9	491.8	490.2	488.8
15	490.5	489.6	488.8	488.7	491.3	492.2	492.8	491.8	490.2	488.7
16	490.5	489.5	488.8	488.8	491.3	492.3	492.8	491.8	490.2	488.6
17	490.5	489.5	488.8	488.9	491.3	492.3	492.9	491.8	490.1	488.6
18	490.5	489.5	488.8	489.0	491.1	492.3	492.9	491.7	490.1	488.6
19	490.4	489.5	488.8	489.2	491.4	492.3	492.8	491.7	490.1	488.6
20	490.4	489.4	488.7	489.3	491.4	492.4	492.7	491.7	490.1	488.6
21	490.4	489.4	488.7	489.5	491.5	492.4	492.6	491.6	490.0	488.6
22	490.3	489.4	488.7	490.7	492.5	492.5	491.5	491.5	489.9	488.5
23	490.3	489.3	488.6	489.8	491.6	492.5	492.5	491.5	489.9	488.5
24	490.3	489.3	488.6	489.9	491.6	492.6	492.5	491.4	489.9	488.4
25	490.2	489.3	488.6	490.0	491.6	492.7	492.5	491.3	489.8	488.4
26	490.2	489.3	488.6	490.1	491.6	492.7	492.5	491.3	489.8	488.3
27	490.2	489.2	488.6	490.2	491.7	492.7	492.5	491.2	489.7	488.3
28	490.1	489.2	488.5	490.3	491.7	492.8	492.4	491.2	489.6	488.3
29	490.1	.....	488.5	490.4	491.7	492.8	492.4	491.2	489.6	.....
30	490.1	.....	488.5	490.4	491.7	492.8	492.4	491.1	489.6	.....
31	490.0	.....	488.5	.....	491.8	.....	492.4	491.1	.....	.....

TABLE 39

WATER LEVELS—RAINY RIVER—GILLON'S RESIDENCE, FORT FRANCES, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. Datum]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1914												
1							464.53	465.15	465.20	465.35		
2							464.53	464.05	465.35	465.35		
3							465.08	464.95	465.35	465.05		
4							464.88	465.25	465.35	463.35		
5							463.03	465.25	465.25	464.85		
6							465.13	465.25	463.75	465.05		
7							465.23	465.25	464.33	465.25		
8							465.36	465.25	464.45	465.30		
9							465.43	464.05	465.05	465.30		
10							465.48	464.85	465.15	465.30		
11							465.33	465.15	465.15	463.85		
12							464.33	465.25	465.15	465.55		
13							466.14	465.25	463.75	465.53		
14							467.37	465.25	464.85	465.45		
15							467.58	465.25	465.25	465.45		
16							467.40	463.35	465.35	465.45		
17							467.13	464.40	465.45	465.45		
18							466.88	464.40	465.55	463.95		
19							465.53	464.40	465.55	465.05		
20							466.13	464.40	464.15	465.55		
21							466.13	464.40	465.15	465.45		
22							466.68	464.05	465.45	465.55		
23							467.13	463.85	465.43	465.65		
24							466.43	464.93	465.55	465.65		
25							466.38	465.15	465.55	464.00		
26							465.83	465.15	465.55	465.05		
27							466.18	465.15	464.15	465.55		
28							466.23	465.25	465.05	465.65		
29							466.18	465.25	465.15	465.65		
30							465.63	463.55	465.35	465.65		
31							465.48	464.75		465.55		

* TABLE 40

WATER LEVELS—RAINY RIVER—LITTLE FORKS, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. Datum]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1914												
1						446.60	464.50	465.40	464.40	464.80	463.80	465.10
2						465.00	464.50	465.20	464.50	464.80	464.30	466.00
3						464.60	464.50	464.40	464.50	464.50	465.10	464.80
4						464.50	463.65	464.50	464.50	463.80	465.20	465.00
5						464.40	463.00	464.50	464.40	464.00	465.00	465.40
6						464.30	464.60	464.40	462.90	464.50	465.10	464.90
7						463.00	464.90	464.40	462.00	464.80	465.20	463.20
8						464.00	465.00	464.40	463.60	464.70	464.30	464.00
9						464.80	465.10	463.20	464.30	464.60	464.50	464.45
10						466.90	465.00	464.00	464.30	465.00	465.00	464.90
11						467.30	464.90	464.10	464.30	463.80	465.00	465.10
12						467.10	464.00	464.20	464.30	464.50	465.00	465.60
13						466.00	465.70	464.30	463.00	465.20	464.80	464.00
14						465.70	467.20	464.40	464.00	465.40	464.60	465.60
15						465.30	467.60	464.40	464.40	465.10	464.60	466.00
16						465.30	467.70	463.30	464.50	465.10	463.50	466.20
17						465.00	467.60	464.10	464.60	465.00	465.20	466.20
18						464.70	467.50	464.40	464.60	463.90	466.10	466.20
19						464.70	466.10	464.50	464.60	464.40	466.50	466.00
20						464.60	466.20	464.50	463.30	465.00	466.50	464.60
21						463.70	465.70	464.50	464.30	465.00	466.30	464.90
22						464.00	466.10	463.80	464.60	464.90	465.40	464.60
23						464.20	466.20	464.10	464.60	465.00	465.40	465.70
24						464.20	466.20	464.30	464.70	465.10	466.20	466.20
25						464.30	465.90	464.40	464.70	463.80	466.00	464.90
26						464.30	465.50	464.50	464.70	464.80	465.70	462.50
27						464.20	465.60	464.50	463.30	465.30	465.10	462.70
28						463.20	465.50	464.60	464.30	465.30	463.60	463.20
29						464.10	465.40	464.70	464.50	465.30	464.10	466.50
30						464.50	465.10	463.20	464.60	465.20	464.50	466.50
31							465.00	463.30		465.20		466.20

* For 1915 records see page 314.

TABLE 41

WATER LEVELS—RAINY RIVER—BIG FORK, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. Datum]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1911												
1										459.20	459.00	
2										458.83	459.00	
3										459.12	458.92	
4										459.50	458.75	
5										459.41	458.42	
6										459.50	458.54	
7										459.41	458.92	
8										459.16	458.91	
9										458.83	459.00	
10										459.00	459.04	
11										459.37	459.33	
12										459.41	460.00	
13										459.33	460.42	
14										459.33	460.67	
15										458.83		
16										458.58		
17										459.08		
18										459.16		
19										459.33		
20									459.54	459.50		
21									459.41	459.29		
22									459.41	458.87		
23									459.45	458.83		
24									459.04	458.75		
25									459.62	459.21		
26									459.04	459.33		
27									459.20	459.42		
28									459.29	459.17		
29									459.29	459.17		
30									459.29	458.62		
31										458.92		
1912												
1					461.45	460.40	459.10	461.50	459.33	461.55	460.20	460.90
2					461.45	459.90	459.35	461.45	459.33	461.35	460.10	461.25
3					461.40	460.20	459.35	461.40	459.54	461.20	459.67	461.60
4					461.70	460.10	459.20	161.10	460.41	461.00	459.42	461.70
5					461.30	460.10	459.10	460.95	461.16	460.20	459.92	461.70
6					461.55	460.05	459.20	461.05	461.33	459.90	460.16	461.55
7					462.30	460.00	458.80	461.15	461.16	460.20	460.08	461.50
8					462.70	460.00	459.20	461.15	460.83	460.20	460.08	461.10
9					462.70	459.50	459.70	461.15	460.33	460.40	459.92	460.85
10					462.90	459.90	459.85	461.05	461.16	460.80	459.58	461.55
11					462.80	459.90	460.20	460.65	460.83	460.80	459.33	461.80
12					462.10	459.90	460.25	460.15	460.66	460.80	459.84	461.91
13					462.00	459.80	460.20	460.40	460.50	460.20	460.00	461.91
14					462.40	459.80	460.00	460.35	460.50	460.20	460.00	461.91
15					462.60	459.85	460.20	460.20	460.20	460.60	459.92	461.25
16					462.70	459.50	460.60	459.65	460.20	460.50	460.18	460.91
17					462.80	459.50	460.90	459.85	460.30	460.45	459.10	461.50
18					462.15	459.50	460.35	459.90	460.10	460.35	459.70	461.67
19					461.45	459.50	460.90	459.90	459.60	460.30	460.00	461.79
20					461.40	459.60	460.20	460.35	459.95	460.10	460.00	461.79
21					461.60	459.80	460.50	459.90	459.70	459.70	460.20	461.75
22					461.10	459.80	460.55	459.65	459.60	459.00	460.10	461.25
23					461.35	459.20	460.70	459.60	459.55	459.80	460.10	460.75
24					461.30	459.10	460.90	459.35	460.10	460.10	459.50	461.00
25					461.10	459.50	460.90	459.55	460.80	460.00	459.17	460.92
26					460.00	459.50	460.85	459.60	462.00	460.00	459.92	460.92
27					460.30	459.25	460.90	459.50	461.90	459.40	460.08	461.08
28					460.70	459.20	460.90	459.65	461.60	459.50	460.33	461.08
29					460.70	459.20	461.40	459.80	461.30	460.00	460.33	461.25
30					460.55	459.90	461.45	459.90	461.60	460.20	460.42	460.83
31					460.45		461.50	459.90		460.20		461.75

* TABLE 41—Continued

WATER LEVELS—RAINY RIVER—BIG FORK, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. Datum]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1913												
1	461.75	462.12	462.29	.....	463.16	462.38	463.37	462.38	459.08	459.66	460.42	460.42
2	461.83	461.54	461.87	.....	462.83	462.50	463.37	462.33	459.75	459.58	460.25	461.00
3	461.79	461.33	461.45	.....	462.83	462.79	463.58	461.93	459.83	459.54	460.50	461.17
4	461.62	462.00	462.08	.....	462.79	462.58	463.29	461.50	460.00	459.50	460.58	461.00
5	461.50	462.17	462.25	.....	463.33	462.38	463.00	461.42	460.08	459.63	460.58	460.83
6	460.92	462.21	462.29	460.67	463.66	462.84	463.58	461.58	460.17	460.37	460.58	460.92
7	461.75	462.21	462.29	460.00	463.58	463.17	463.83	461.58	460.00	461.00	460.67	461.66
8	461.91	462.21	462.33	460.41	463.41	463.46	463.75	461.93	460.12	461.42	460.50	462.00
9	462.00	461.87	461.83	460.91	463.08	463.63	463.80	461.93	460.16	461.58	459.92	462.50
10	462.04	461.50	461.58	460.83	462.66	463.41	464.00	461.08	460.16	461.92	459.42	462.33
11	462.00	462.08	462.21	460.83	462.00	463.00	464.08	461.42	460.25	462.50	459.50	462.33
12	461.67	462.21	462.37	460.83	462.00	462.58	464.25	461.42	460.37	462.25	460.08	462.33
13	461.37	462.21	462.37	460.67	462.00	462.25	464.75	461.50	460.37	462.25	460.25	462.17
14	461.92	462.21	462.37	461.50	461.91	462.04	465.58	461.58	460.00	462.42	460.25	461.59
15	462.08	462.21	462.37	462.83	461.91	461.50	465.58	461.58	460.08	462.46	460.25	461.33
16	462.12	461.75	461.83	463.58	462.08	461.67	465.93	461.58	460.50	462.37	459.92	461.83
17	462.12	461.33	461.75	463.75	462.75	461.58	466.29	461.16	460.08	461.92	459.92	461.83
18	462.12	462.04	462.29	463.83	463.17	461.50	466.25	461.33	460.08	461.66	460.17	461.83
19	461.65	462.21	462.37	463.79	463.25	461.42	466.13	461.37	460.08	461.25	460.17	461.83
20	461.33	462.25	462.50	463.25	462.38	461.50	465.50	461.50	461.16	461.30	460.17	462.00
21	461.96	462.29	462.50	463.21	463.08	461.83	465.29	461.58	460.25	461.38	460.00	461.75
22	462.12	462.29	462.54	463.16	463.00	461.58	465.00	461.58	460.41	461.17	460.17	.....
23	462.17	461.91	461.91	463.08	463.17	461.75	464.75	461.58	459.83	461.08	460.25	.....
24	462.21	461.41	461.75	463.00	463.25	461.83	464.50	461.00	459.83	461.08	460.38	.....
25	462.08	462.08	462.41	463.33	462.75	461.83	464.29	460.66	459.75	461.08	460.83	.....
26	461.75	462.25	462.62	463.91	462.58	461.83	464.17	460.25	459.71	460.92	460.83	.....
27	461.83	462.29	462.75	463.91	462.50	461.75	463.83	460.25	459.66	460.83	460.83	.....
28	461.91	462.29	462.83	463.83	462.25	462.17	463.88	460.16	459.58	461.00	460.83	.....
29	462.17	.....	462.91	463.83	461.96	462.83	463.78	.....	459.63	460.83	460.75	.....
30	462.25	.....	.....	463.50	462.00	463.16	463.66	.....	459.66	460.58	460.83	.....
31	462.17	.....	.....	.....	462.50	.....	462.75	459.17	.....	460.58	.....	.....
1914												
1	.....	.....	.....	.....	.....	.....	462.20	462.30	461.60	462.40	462.05	461.90
2	.....	.....	.....	.....	.....	.....	462.10	461.70	462.10	462.40	461.90	462.30
3	.....	.....	.....	.....	.....	.....	462.00	461.65	462.25	462.30	462.60	462.30
4	.....	.....	.....	.....	.....	.....	461.10	461.90	462.15	461.35	462.70	462.40
5	.....	.....	.....	.....	.....	.....	460.10	462.05	462.10	461.30	462.75	462.20
6	.....	.....	.....	.....	.....	.....	461.10	462.00	461.50	461.60	462.80	461.90
7	.....	.....	.....	.....	.....	.....	462.55	462.00	460.50	462.10	462.80	461.20
8	.....	.....	.....	.....	.....	.....	462.40	461.80	460.50	462.15	461.40	462.00
9	.....	.....	.....	.....	.....	463.10	462.40	461.60	461.70	462.25	461.70	462.40
10	.....	.....	.....	.....	.....	464.20	462.30	461.40	461.90	462.50	462.40	462.90
11	.....	.....	.....	.....	.....	465.40	462.25	461.95	461.90	461.90	462.60	463.00
12	.....	.....	.....	.....	.....	465.20	461.80	462.00	461.90	462.80	462.50	463.10
13	.....	.....	.....	.....	.....	464.80	463.10	462.00	461.30	463.10	462.40	463.00
14	.....	.....	.....	.....	.....	463.90	465.30	462.00	462.00	463.20	462.05	463.10
15	.....	.....	.....	.....	.....	463.25	465.50	462.00	462.40	463.20	461.30	463.70
16	.....	.....	.....	.....	.....	463.00	465.30	461.20	462.50	463.10	461.60	463.80
17	.....	.....	.....	.....	.....	463.30	464.70	461.00	462.60	463.00	462.30	463.90
18	.....	.....	.....	.....	.....	463.70	464.30	461.80	462.80	462.10	463.00	464.00
19	.....	.....	.....	.....	.....	462.30	463.35	461.90	462.75	461.90	463.70	463.90
20	.....	.....	.....	.....	.....	462.10	463.15	461.90	462.10	462.15	463.90	462.90
21	.....	.....	.....	.....	.....	461.40	463.20	461.90	461.90	462.50	464.00	462.00
22	.....	.....	.....	.....	.....	461.20	463.60	461.95	462.60	462.90	463.60	463.00
23	.....	.....	.....	.....	.....	461.70	463.45	461.50	462.80	462.95	463.00	463.20
24	.....	.....	.....	.....	.....	461.75	463.25	461.70	462.90	462.05	463.90	463.20
25	.....	.....	.....	.....	.....	461.75	463.05	461.80	462.90	462.20	463.80	462.20
26	.....	.....	.....	.....	.....	461.80	462.60	462.00	462.85	462.40	463.80	460.30
27	.....	.....	.....	.....	.....	461.75	463.80	462.10	462.15	462.90	463.30	460.70
28	.....	.....	.....	.....	.....	460.11	463.90	462.10	461.80	463.00	462.50	460.00
29	.....	.....	.....	.....	.....	461.60	463.80	462.15	462.50	463.00	461.60	460.30
30	.....	.....	.....	.....	.....	462.20	463.40	461.50	462.50	463.00	461.80	463.70
31	.....	.....	.....	.....	.....	.....	462.55	461.20	.....	462.90	.....	463.80

* For 1915 records see page 315.

TABLE 42

WATER LEVELS—RAINY RIVER—EMO, ONTARIO.

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. Datum]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1911												
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14									456.32			
15									456.28			
16									456.16			
17												
18									455.91			
19									456.03			
20									456.36			
21									456.32			
22									456.32			
23									456.32			
24												
25									455.24			
26									455.08			
27									455.08			
28									455.41			
29									455.51			
30									455.24			
31												
1912												
1					457.53	456.98		458.03		458.20		
2					457.58			457.98	455.95	458.13		
3					457.88			458.08	455.87	457.85		
4					458.00	456.53			456.53	457.70		
5						456.58		457.53	457.53			
6					457.63	456.48		457.58	457.94			
7					458.53	456.48		457.68	458.28			
8					459.03	456.58	459.48	457.58				
9					459.28		459.23	457.58	458.53			
10						456.13	458.78	457.58	457.28			
11					458.93	456.28	458.88		457.53			
12						456.33	459.13	457.20	457.37			
13					457.78	456.23	459.33	457.20	457.45			
14					458.28	456.03		457.28	457.37			
15					458.43	456.03	459.33	457.20				
16					458.53		459.03	456.95	456.70			
17					458.63		458.93	456.20	456.62			
18					458.53		458.88		456.62			
19							458.58	456.62	456.45			
20					457.33		458.63	456.87	456.29			
21					457.68			456.95	456.20			
22					457.78		458.03	456.28				
23					457.98		457.88	456.11	456.20			
24					457.98	455.83	457.78	455.95	456.73			
25					457.53	455.93	457.68		457.53			
26						455.88	457.68		458.28			
27					456.58	455.88	457.58		458.78			
28					457.13	455.78			458.33			
29					457.18	455.78	457.88					
30					457.08		458.03		457.85			
31					456.98		458.03					

* TABLE 42—Continued

WATER LEVELS—RAINY RIVER—EMO, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

Elevations refer to D. P. W. Datum

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1913												
1				458.27	459.28	458.33	458.68	458.79	455.37	455.44	456.63	456.28
2				458.59	459.09	458.21	459.07	458.13	455.37	456.05	456.57	456.73
3				458.47	458.87	458.58	459.05	458.05	455.93	455.99	456.37	457.08
4				458.45	458.88	458.67	459.28	458.73	456.20	455.89	456.66	457.17
5				458.59	458.96	458.35	458.87	457.58	456.37	455.98	456.68	457.00
6				458.98	459.39	458.59	458.76	457.37	456.39	456.35	456.67	456.88
7				458.38	459.67	458.93	459.46	457.43	457.26	456.91	456.66	455.73
8				458.06	459.77	459.27	459.47	457.62	456.35	457.68	456.65	457.19
9				458.96	458.42	459.35	459.36	457.85	456.44	457.95	456.47	457.75
10				458.17	459.01	459.32	459.47	457.70	456.46	458.16	455.86	458.86
11				457.86	458.67	459.15	459.65	457.26	456.47	458.51	455.84	458.98
12				457.47	458.12	458.74	459.76	457.47	456.57	458.73	455.99	458.82
13				457.46	458.18	458.32	460.43	457.58	456.75	458.66	456.23	458.94
14				457.12	458.35	458.11	460.68	457.59	456.73	458.64	456.33	458.39
15				458.39	458.00	457.95	461.15	457.57	456.68	458.67	456.27	457.90
16				459.77	458.21	457.57	461.16	457.56	456.66	458.53	456.25	457.58
17				459.96	458.34	457.60	461.77	457.61	456.61	458.22	455.87	.....
18				460.07	459.27	457.55	461.99	457.25	456.58	457.98	456.05	.....
19				460.12	459.39	457.57	461.75	457.39	456.53	457.79	456.15	.....
20				459.98	459.58	457.99	461.60	457.48	456.49	457.28	456.15	.....
21				459.42	459.26	457.67	461.09	457.61	456.45	457.31	456.06	.....
22				459.38	459.05	457.93	460.77	457.73	456.28	457.35	456.08	.....
23				459.16	458.97	457.64	460.53	457.74	456.29	457.25	456.37	.....
24				459.12	459.08	457.78	460.29	457.74	456.23	457.17	456.17	.....
25				459.25	459.00	457.77	460.15	457.25	456.19	457.18	457.57	.....
26				459.62	458.38	457.79	459.94	456.77	456.08	457.19	457.77	.....
27				459.44	458.49	457.70	459.77	456.50	456.09	456.97	457.34	.....
28				460.28	458.37	457.55	459.32	456.27	456.08	456.94	456.79	.....
29				459.89	457.95	457.55	459.41	456.25	455.96	456.90	456.78	.....
30				459.58	457.94	457.97	459.47	456.18	456.05	456.76	456.65	.....
31				.....	458.07	.....	458.98	456.15	.....	456.71	.....	.....
1914												
1				455.91	459.38	458.58	458.74	458.60	458.10	.....	.....	457.70
2				456.13	459.80	458.76	458.46	458.00	458.30	.....	.....	458.60
3				456.08	460.35	458.54	458.58	457.90	458.20	.....	.....	458.50
4				456.01	460.55	458.38	458.62	458.00	458.40	.....	.....	458.90
5				456.06	460.98	458.19	457.74	458.10	458.20	.....	.....	458.70
6				455.49	461.14	458.07	457.94	458.10	456.90	.....	.....	457.80
7				455.78	461.00	457.58	458.42	458.10	457.00	.....	.....	457.40
8				455.91	460.85	457.19	458.69	458.10	456.30	.....	.....	457.70
9				455.98	460.51	457.05	458.66	458.00	457.50	.....	.....	458.30
10				456.01	460.10	459.57	458.60	457.90	457.90	.....	.....	460.10
11				456.08	459.56	460.69	458.58	458.00	457.80	.....	.....	460.50
12				456.07	459.50	461.00	458.52	458.10	458.10	.....	.....	460.60
13				455.53	459.31	460.65	459.74	458.00	457.50	.....	.....	460.00
14				455.84	459.10	460.19	461.00	458.10	457.60	.....	.....	459.00
15				456.15	458.87	459.07	461.90	458.00	458.10	.....	458.20	459.60
16				456.44	458.66	459.35	461.64	457.50	458.50	.....	458.70	459.80
17				456.68	458.43	458.59	461.13	457.30	459.00	.....	458.90	459.80
18				457.48	457.98	458.36	460.70	456.90	458.80	.....	459.40	459.80
19				458.33	458.09	457.97	459.90	457.60	459.00	.....	459.50	459.80
20				458.21	458.92	457.98	459.70	457.70	459.10	.....	459.70	459.70
21				458.38	460.49	456.87	459.50	457.60	458.90	.....	460.00	458.80
22				458.33	460.90	456.99	459.30	457.70	458.70	.....	459.80	459.00
23				458.30	460.69	457.53	459.40	457.50	458.60	.....	459.50	459.70
24				458.23	460.26	456.51	459.60	457.20	458.70	.....	459.60	459.20
25				458.15	459.57	456.48	459.30	457.70	458.90	.....	459.80	458.80
26				458.37	459.65	457.48	459.10	457.90	458.90	.....	459.70	457.90
27			458.37	458.09	459.37	457.53	458.90	458.40	458.70	.....	459.10	457.90
28			458.37	458.14	459.26	457.47	459.20	458.10	458.40	.....	458.80	458.10
29			458.14	458.28	459.33	457.33	459.00	458.30	458.10	.....	457.70	459.60
30			457.02	458.79	459.35	457.67	458.70	457.50	458.50	.....	457.20	459.70
31			456.32	.....	458.79	.....	458.50	457.80	.....	.....	.....	459.80

* For 1915 records see page 315.

TABLE 43

WATER LEVELS—RAINY RIVER—EMO, ONTARIO

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

1912 [1]	September		October		November		December	
	Local Datum	D. W. P. Datum	Local Datum	D.P.W. Datum	Local Datum	D. P. W. Datum	Local Datum	D. P. W. Datum
1					1.44	456.81	3.90	459.27
2			2.66	458.03	1.30	456.67	3.40	458.77
3			2.58	457.95	1.35	456.72	3.50	458.87
4			2.39	457.76	0.66	456.03	3.40	458.77
5			2.26	457.63	0.10	455.47	2.60	457.97
6			1.28	456.65	1.19	456.56	2.07	457.44
7			1.78	457.15	1.26	456.63	3.40	458.77
8			1.96	457.33	1.40	456.77	3.00	458.37
9			1.92	457.29	1.49	456.86	2.00	457.37
10			1.99	457.36	1.48	456.85		
11			1.90	457.27	0.50	455.87		
12			2.08	457.45	1.46	456.83		
13			2.02	457.39	1.08	456.45		
14			1.66	457.03	1.22	456.59	2.00	457.37
15			1.88	457.25	1.26	456.63		
16			1.79	457.16	1.17	456.54	1.90	457.27
17			1.60	456.97	1.26	456.63		
18			1.63	457.00	1.08	456.45		
19			1.90	457.27	0.40	455.77	1.80	457.17
20			1.80	457.17	1.10	456.47		
21			1.61	456.98	1.29	456.66		
22			0.92	456.29	1.22	456.59		
23			1.19	456.56				
24			1.38	456.75	0.90	456.27	1.70	457.07
25			1.33	456.70	0.20	455.57		
26			1.32	456.69	0.78	456.15		
27			1.10	456.47	0.90	456.27		
28			1.62	456.99	1.29	456.66	1.70	457.07
29			1.19	456.56	2.00	457.37		
30			1.20	456.57	3.10	458.47		
31			1.39	456.76				

1913 [2]	January		February		March		April	
1			1.50	456.90	2.70	458.10	2.90	458.30
2							3.22	458.62
3							3.10	458.50
4							3.08	458.48
5							3.22	458.62
6	1.70	457.10					3.61	459.01
7							3.01	458.41
8			1.40	456.80			2.69	458.09
9								
10								
11								
12								
13								
14								
15			1.40	456.80				
16								
17	1.20	456.60						
18								
19								
20					3.09	458.49		
21					3.17	458.57		
22			2.30	457.70	3.19	458.59		
23	1.20	456.60			3.17	458.57		
24	1.50	456.90			2.34	457.74		
25					2.72	458.12		
26					3.01	458.41		
27					3.18	458.58		
28					3.20	458.60		
29					3.21	458.61		
30					3.20	458.60		
31					2.64	458.04		

[1] Zero of Gauge 455.37 Public Works (Canada) Datum, Oct. 2, 1912.
[2] Zero of Gauge 455.40 Public Works (Canada) Datum, Mar. 22, 1913.

TABLE 44

WATER LEVELS—RAINY RIVER—BIRCHDALE, MINN.

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. Datum]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1911												
1											450.80	
2											450.90	
3											450.80	
4										451.20	450.80	
5										451.40	450.70	
6										451.50	450.40	
7										451.40	450.50	
8										451.30	450.80	
9										451.00	450.80	
10										450.90	450.80	
11										451.10	450.60	
12										451.30	450.70	
13										451.30		
14										451.30		
15										451.10		
16										450.60		
17										450.70		
18										451.00		
19										451.20		
20										451.30		
21										451.40		
22										451.20		
23										450.70		
24										450.70		
25										450.80		
26										451.20		
27										451.20		
28										451.20		
29										451.20		
30										450.80		
31										450.70		
1912												
1					453.30	452.50	451.20	453.20	452.10	453.60	452.30	
2					453.40	452.40	451.30	453.20	451.80	453.50	452.20	
3					453.40	451.80	451.50	453.20	451.60	453.30	452.20	
4					453.40	452.00	451.60	453.20	452.10	453.20	451.70	
5					453.60	452.30	451.30	452.90	452.80	453.00	451.90	
6					453.20	452.20	451.30	452.80	453.20	452.90	452.20	
7					453.80	452.10	451.40	453.00	453.20	452.50	452.10	
8					454.20	452.20	451.10	453.10	453.10	452.70	452.20	
9					454.30	452.20	451.50	453.00	453.80	452.80	452.30	
10					454.40	451.80	451.90	453.00	453.00	452.80	452.10	
11					454.40	451.90	452.20	452.90	453.00	452.80	451.70	
12					454.30	452.00	452.30	452.50	452.90	452.80	451.90	
13					453.50	451.90	452.40	452.20	452.70	452.90	452.00	
14					453.90	451.90	452.40	452.30	452.60	452.50	452.10	
15					454.20	451.90	452.00	452.30	452.50	452.70	452.10	
16					454.20	451.80	452.30	452.00	452.10	452.60	452.10	
17					454.20	451.60	452.30	451.80	452.30	452.60	452.10	
18					454.00	451.70	452.60	452.00	452.30	452.50	451.40	
19					453.70	451.70	452.60	451.90	452.10	452.50	451.90	
20					452.90	451.70	451.80	452.10	452.00	452.40	452.00	
21					453.30	451.80	452.30	452.30	452.00	452.00	452.10	
22					453.40	451.80	452.30	452.00	451.80	452.00	452.10	
23					453.30	451.80	452.50	451.80	451.70	452.20	452.10	
24					453.10	451.40	452.40	451.60	452.20	452.10	452.00	
25					453.00	451.50	452.50	451.70	452.80	452.20	451.50	
26					452.80	451.60	452.80	451.50	453.80	452.10	451.70	
27					451.90	451.40	452.60	451.60	454.10	452.10	451.80	
28				452.90	452.40	451.40	452.90	451.70	453.90	451.80	452.20	
29				452.50	452.60	451.40	452.80	451.90	453.80	452.00		
30				453.00	452.60	451.50	453.10	452.00	453.50	452.20		
31					452.30		453.20	452.10		452.30		

*TABLE 44—Continued

WATER LEVELS—RAINY RIVER—BIRCHDALE, MINN.

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. Datum]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1913												
1				453.60	454.80	454.00	454.50	453.90	451.20	451.70	452.20	451.90
2				453.70	454.40	454.00	454.60	453.70	451.30	451.70	452.20	452.30
3				453.60	454.40	454.30	454.50	453.60	451.80	451.70	452.00	452.60
4				453.60	454.40	454.30	454.80	453.40	452.00	451.70	452.00	452.70
5				453.80	454.40	454.00	454.30	453.10	452.10	451.80	452.30	452.50
6				453.90	454.90	454.40	454.30	453.00	452.10	452.00	452.30	452.40
7				453.70	455.00	454.60	454.90	453.00	452.10	452.70	452.30	.....
8				453.90	454.90	455.00	454.90	453.20	452.20	453.20	452.30	.....
9				453.60	454.70	455.00	454.80	453.40	452.20	453.50	452.10	.....
10				454.50	454.40	454.90	454.90	453.30	452.20	453.70	451.50	.....
11				454.50	454.30	454.70	455.10	452.90	452.20	454.00	451.40	.....
12				453.70	453.80	454.30	455.20	453.10	452.30	454.30	451.80	.....
13				453.20	453.90	454.00	455.60	453.20	452.50	454.10	451.80	.....
14				452.90	453.80	453.70	456.00	453.20	452.40	454.10	452.10	.....
15				455.00	453.80	453.40	456.30	453.30	452.10	454.00	452.10	.....
16				455.30	453.80	453.20	456.30	453.30	452.30	453.90	451.90	.....
17				455.40	454.00	453.30	456.70	453.30	452.30	453.70	451.60	.....
18				455.60	454.70	453.20	456.80	453.00	452.30	453.40	451.70	.....
19				455.50	454.80	453.10	456.70	453.00	452.20	453.30	451.80	.....
20				455.00	455.00	453.00	456.50	453.10	452.30	452.90	451.80	.....
21				454.80	454.70	453.30	456.00	453.20	452.20	453.00	451.70	.....
22				453.80	454.50	453.40	455.90	453.20	452.00	452.90	451.80	.....
23				454.60	454.40	453.20	455.80	453.20	452.10	452.80	451.90	.....
24				454.50	454.60	453.30	455.50	453.20	452.00	452.80	451.80	.....
25				454.80	454.40	453.30	455.40	452.80	451.90	452.80	452.20	.....
26				455.60	454.00	453.30	455.30	452.40	451.80	452.80	452.40	.....
27				455.40	454.00	453.30	455.10	452.10	451.80	452.60	452.40	.....
28				455.20	453.90	453.20	454.80	452.00	451.80	452.70	452.40	.....
29				455.30	453.80	453.80	454.90	452.00	451.70	452.60	452.40	.....
30				455.00	453.80	454.20	454.80	452.00	451.70	452.40	452.30	.....
31				.....	453.70	.....	454.50	451.90	.....	452.30	.....	.....
1914												
1				.....	454.80	454.30	453.90	453.50	453.00	453.60	454.00	453.40
2				.....	455.10	454.40	453.70	453.00	453.30	453.60	453.00	453.60
3				.....	455.80	454.40	453.80	452.60	453.40	453.50	453.70	453.60
4				.....	456.10	454.40	453.80	453.10	453.40	453.40	454.00	453.60
5				451.80	456.40	454.00	453.10	453.20	453.40	452.40	454.00	453.80
6				451.30	456.80	453.80	452.70	453.30	453.20	453.20	453.90	453.50
7				451.60	456.30	453.80	453.70	453.30	452.10	453.40	454.00	452.20
8				451.80	456.20	453.10	453.80	453.30	451.10	453.50	453.90	453.10
9				451.80	455.80	453.80	453.80	452.90	452.60	453.50	453.00	453.40
10				451.70	456.60	455.40	453.80	452.40	453.10	453.80	453.60	453.50
11				451.80	455.10	456.20	453.70	453.00	453.20	453.90	453.80	454.00
12				451.90	455.00	456.40	453.80	453.20	453.20	453.30	453.70	454.50
13				451.90	454.80	456.00	454.70	453.20	453.10	454.30	453.70	454.40
14				451.70	454.60	455.60	456.20	453.20	452.30	454.60	453.40	453.50
15				452.00	454.40	454.60	456.40	453.20	453.20	454.50	453.30	454.50
16				452.20	454.30	454.50	456.20	453.10	453.60	454.30	452.50	454.80
17				452.60	454.00	454.20	455.90	452.10	453.80	454.30	453.90	455.10
18				453.30	453.60	454.10	455.80	452.80	454.00	453.80	454.40	455.10
19				453.90	453.80	453.90	455.20	453.10	453.90	453.10	454.50	455.00
20				453.80	454.80	453.70	454.50	453.10	453.90	453.80	454.70	455.10
21				453.80	456.00	453.60	454.60	453.10	453.10	454.00	455.00	453.70
22				453.90	456.20	452.80	454.50	453.10	453.80	454.00	454.80	454.20
23				453.80	456.00	453.10	454.80	453.00	454.00	454.20	454.50	454.80
24				453.80	455.70	453.20	454.60	452.20	454.10	454.30	454.40	455.00
25				453.70	455.10	453.20	454.50	453.00	454.10	454.20	454.40	455.10
26				454.00	455.80	453.30	454.30	453.20	454.10	453.50	454.40	453.00
27				453.60	455.00	453.30	454.00	453.30	453.90	454.10	454.30	452.40
28				453.80	454.80	453.20	454.20	453.40	452.90	454.20	454.00	452.50
29				453.80	454.90	452.70	454.10	453.40	453.60	454.20	453.70	454.50
30				454.30	455.00	453.40	454.00	453.30	453.70	454.20	452.60	455.20
31				.....	455.00	.....	453.70	452.30	.....	454.10	.....	455.40

* For 1915 records see page 316.

†TABLE 45

WATER LEVELS—RAINY RIVER—BIRCHDALE, MINN. LOWER GAUGE—LONG SAULT RAPIDS

RECORDS OF INTERNATIONAL JOINT COMMISSION

[Referred to Dept. Public Works (Canada) Datum]

1914	March		April		May		June		July	
	Gauge Height	D.P.W. Datum	Gauge Height	D.P.W. Datum	Gauge Height	D.P.W. Datum	Gauge Height	D.P.W. Datum	Gauge Height	D.P.W. Datum
1	.....	.....	5.5	449.5	5.5	449.5	6.3	450.3	6.0	450.0
2	.....	.....	5.4	449.4	5.7	449.7	6.2	450.2	5.9	449.9
3	.....	.....	5.3	449.3	5.9	449.9	6.0	450.0	5.8	449.8
4	.....	.....	5.0	449.0	6.1	450.1	5.7	449.7	5.75	449.75
5	.....	.....	4.8	448.8	6.5	450.5	5.6	449.6	5.65	449.65
6	.....	.....	4.6	448.6	6.8	450.8	5.5	449.5	5.55	449.55
7	.....	.....	4.5	448.5	7.1	451.1	5.6	449.6	6.15	450.15
8	.....	.....	4.4	448.4	7.0	451.0	6.0	450.0	5.8	449.8
9	.....	.....	4.4	448.4	6.8	450.8	6.4	450.4	5.8	449.8
10	.....	.....	4.5	448.5	6.6	450.6	6.85	450.85	5.85	449.85
11	.....	.....	4.6	448.6	6.5	450.5	7.35	451.35	5.9	449.9
12	.....	.....	4.6	448.6	6.4	450.4	7.5	451.5	5.85	449.85
13	.....	.....	4.5	448.5	6.3	450.3	7.3	451.3	6.1	450.1
14	.....	.....	4.4	448.4	6.3	450.3	7.2	451.2	6.8	450.8
15	.....	.....	4.35	448.35	6.0	450.0	6.9	450.9	7.2	451.2
16	.....	.....	4.35	448.35	5.8	449.8	6.55	450.55	7.45	451.45
17	.....	.....	4.4	448.4	5.6	449.6	6.3	450.3	7.6	451.6
18	.....	.....	4.5	448.5	5.7	449.7	6.2	450.2	6.9	450.9
19	.....	.....	4.6	448.6	5.8	449.8	6.1	450.1	6.7	450.7
20	.....	.....	4.7	448.7	5.95	449.95	5.9	449.9	6.4	450.4
21	.....	.....	4.8	448.8	6.6	450.6	5.9	449.9	6.4	450.4
22	.....	.....	4.9	448.9	7.1	451.1	5.65	449.65	6.4	450.4
23	.....	.....	4.9	448.9	7.2	451.2	5.5	449.5	6.45	450.45
24	.....	.....	5.0	449.0	7.0	451.0	5.4	449.4	6.4	450.4
25	.....	.....	5.0	449.0	6.9	450.9	5.4	449.4	6.4	450.4
26	.....	.....	5.1	449.1	6.8	450.8	5.55	449.55	6.35	450.35
27	.....	.....	5.2	449.2	6.5	450.5	5.6	449.6	6.3	450.3
28	.....	.....	5.2	449.2	6.2	450.2	5.7	449.7	6.2	450.2
29	.....	.....	5.3	449.3	6.4	450.4	5.8	449.8	6.2	450.2
30	.....	.....	5.4	449.4	6.5	450.5	5.9	449.9	6.15	450.15
31	.....	.....	.....	.....	6.3	450.3	.....	.....	6.1	450.1

1914	August		September		October		November		December	
1	6.05	450.05	5.1	449.1	5.2	449.2	5.9	449.9	6.2	450.2
2	5.85	449.85	5.2	449.2	5.2	449.2	5.8	449.8	6.3	450.3
3	5.7	449.7	5.25	449.25	5.15	449.15	5.85	449.85	6.4	450.4
4	5.6	449.6	5.3	449.3	5.2	449.2	5.9	449.9	6.45	450.45
5	5.6	449.6	5.35	449.35	5.1	449.1	6.0	450.0	6.5	450.5
6	5.6	449.6	5.3	449.3	5.15	449.15	5.8	449.8	6.5	450.5
7	5.55	449.55	5.35	449.35	5.2	449.2	5.9	449.9	6.4	450.4
8	5.5	449.5	5.3	449.3	5.5	449.5	6.0	450.0	6.4	450.4
9	5.45	449.45	5.25	449.25	5.8	449.8	5.9	449.9	6.45	450.45
10	5.4	449.4	5.2	449.2	6.0	450.0	5.8	449.8	6.5	450.5
11	5.3	449.3	5.2	449.2	5.9	449.9	5.75	449.75	6.6	450.6
12	5.4	449.4	5.25	449.25	5.8	449.8	5.7	449.7	6.7	450.7
13	5.5	449.5	5.2	449.2	5.7	449.7	5.65	449.65	6.8	450.8
14	5.6	449.6	5.2	449.2	5.8	449.8	5.6	449.6	6.9	450.9
15	5.6	449.6	4.9	448.9	5.7	449.7	5.7	449.7	6.95	450.95
16	5.55	449.55	5.1	449.1	5.8	449.8	5.8	449.8	7.0	451.0
17	5.5	449.5	5.2	449.2	5.85	449.85	5.9	449.9	7.0	451.0
18	5.4	449.4	5.3	449.3	5.6	449.6	*5.9	449.9	7.1	451.1
19	5.3	449.3	5.2	449.2	5.5	449.5	.....	.....	7.15	451.15
20	5.35	449.35	5.1	449.1	5.6	449.6	.....	.....	7.1	451.1
21	5.3	449.3	5.15	449.15	5.7	449.7	.....	.....	7.1	451.1
22	5.2	449.2	6.4	450.4	5.8	449.8	.....	.....	7.2	451.2
23	5.2	449.2	5.6	449.6	6.6	450.6	.....	.....	7.25	451.25
24	5.1	449.1	5.4	449.4	6.0	450.0	.....	.....	7.3	451.3
25	5.0	449.0	5.5	449.5	6.1	450.1	.....	.....	7.3	451.3
26	5.3	449.3	5.55	449.55	5.9	449.9	.....	.....	7.25	451.25
27	5.2	449.2	5.4	449.4	5.7	449.7	.....	.....	7.2	451.2
28	5.2	449.2	5.2	449.2	5.9	449.9	.....	.....	7.2	451.2
29	5.25	449.25	5.3	449.3	6.1	450.1	7.1	451.1	7.25	451.25
30	5.3	449.3	5.25	449.25	6.0	450.0	6.1	450.1	7.3	451.3
31	5.0	449.0	.....	.....	5.95	449.95	.....	.....	7.35	451.35

*The river is now frozen over on the 18th of November. Please advise me what to do in the future. (Gauge reader.)

† For 1915 records see page 317.

TABLE 46

WATER LEVELS—RAINY RIVER—BOUCHERVILLE, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. Datum]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1911												
1											445.30	
2											444.90	
3											444.90	
4											444.80	
5												
6												
7												
8										445.10		
9										444.95		
10										445.00		
11										445.15		
12										445.25		
13										445.15		
14										445.15		
15										445.10		
16										445.05		
17										445.20		
18										445.25		
19										445.35		
20										445.50		
21										445.10		
22										444.90		
23										445.10		
24										445.00		
25										445.10		
26										445.15		
27										445.10		
28										445.60		
29										445.65		
30										445.55		
31										445.30		
1912												
1					446.25	446.80	446.40	447.80	447.30	448.70		
2					446.40	446.80	446.45	447.60	447.40	448.70		
3					446.30	447.40	446.80	447.55	447.45	448.90	448.40	
4					446.20	446.70	446.80	447.50	447.50	448.65	448.90	
5					446.40	446.80	446.60	447.10	447.65	448.75	448.60	
6					446.00	446.30	446.70	447.40	448.10	449.30	448.40	
7					446.90	446.90	446.65	447.10	447.90	448.60	448.50	
8					447.10	446.85	446.80	447.50	447.85	448.65	449.50	
9					447.00	446.15	447.00	447.65	448.00	448.90	448.30	
10					447.40	446.40	446.90	447.65	448.25	448.85	448.70	
11					447.30	447.00	446.95	447.60	448.10	448.65	448.50	
12					447.20	446.90	447.05	447.35	447.90	448.90	448.60	
13					447.00	446.70	447.05	447.65	447.80	448.80	448.60	
14					447.05	446.65	447.50	447.65	447.75	449.10	448.45	
15					447.20	446.90	447.00	447.40	448.05	448.70	448.35	
16					447.25	447.30	447.00	447.30	447.85	448.60	449.30	
17					447.25	447.05	447.55	447.25	447.90	448.60	448.40	
18					447.70	446.80	447.35	447.20	447.95	448.65	448.30	
19					447.05	446.85	447.05	447.30	447.80	448.90	448.55	
20					446.90	446.80	447.00	447.55	447.75	448.50	448.60	
21					446.85	446.85	446.90	447.60	447.70	448.90	448.65	
22					447.00	446.70	447.00	447.85	448.20	448.65	448.65	
23					447.00	446.65	447.20	447.30	448.90	448.10	449.05	
24					446.95	446.60	447.60	447.45	448.70	448.50	448.50	
25					447.00	446.80	447.40	447.35	449.50	448.50	448.60	
26					446.90	446.65	447.20	447.50	449.20	448.60	448.95	
27					446.20	446.50	447.40	447.35	448.90			
28					446.95	446.55	447.65	447.40	448.90			
29					446.50	446.50	447.45	447.35	448.90			
30					446.85	446.40	447.75	447.50	448.80			
31					447.00		447.75	447.40				

* TABLE 46—Continued

WATER LEVELS—RAINY RIVER—BOUCHERVILLE, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. Datum.]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1913												
1				448.50	449.90	449.50	448.60			447.80	448.50	
2				448.70	449.55	449.50	448.75			447.80	448.00	
3				448.80	449.90	449.50	449.40			447.90	448.00	
4				448.85	449.80	449.50	449.45			448.00	448.00	
5				448.90	449.95	449.40	449.30			448.05	448.00	
6				448.95	450.00		449.35			448.10	448.10	
7				448.90	449.95	450.10	449.40			448.10	448.80	
8				448.90	450.00	449.95	449.80			447.40	448.30	
9				448.90	449.90	449.70	449.60			447.80	448.50	
10				449.35	449.90	449.60	449.30			448.40		
11				449.40	449.60	449.55	449.20			448.60		
12				449.45	449.50	449.40	449.80			448.90		
13				449.70	449.55	449.30	449.70			448.50		
14				449.95	449.45	449.30	449.95		448.25	448.60		
15				449.50	449.50	449.30	450.10		448.20	448.50		
16				449.45	449.50	449.10			448.30	448.40		
17				450.00	449.55	449.20	450.80		448.00	448.30		
18				450.05	450.00	449.20	450.80		447.60	448.50		
19				450.00	449.95	449.10	450.70		448.20	448.90		
20				449.90	450.00	449.10	450.50		449.30	448.80		
21				449.60	449.75	449.10	450.40		449.20	448.20		
22				449.55	449.70	449.10	450.30		447.80	448.50		
23				449.65	449.60	449.00	450.20		448.00	448.00		
24				449.80	449.60	448.95	450.00		448.10	448.70		
25				449.85	449.55	449.85	449.90		448.00	448.70		
26				449.95	449.40	448.80	449.80		447.95	448.50		
27				450.00	449.30	449.00			447.90	448.90		
28				449.95	449.00	449.00			447.90	448.90		
29				449.90	449.20	448.65			447.90	448.20		
30				449.75	449.50	448.65			447.90	448.20		
31					449.50					448.60		
1914												
1					448.80	449.70	449.50	449.30	448.50	448.60	449.10	449.10
2					449.10	449.50	449.50	449.00	448.80	448.60	449.20	449.35
3					449.40	449.50	449.40	449.00	448.80	448.60	449.30	449.30
4					449.50	449.50	449.30	449.30	448.70	448.50	450.00	449.40
5					449.70	449.50	449.20	449.50	448.70	448.50	450.00	449.45
6					449.90	449.20	449.50	449.50	448.80	448.60	448.80	449.45
7					450.00	449.00	449.70	449.80	448.50	448.70	450.40	449.10
8					449.90	449.10	449.10	449.80	448.70	448.80	449.00	449.15
9					449.70	450.00	449.20	449.20	448.70	448.90	448.80	449.20
10					449.60	450.30	449.20	449.20	448.60	448.95	449.10	449.20
11					449.50	450.90	449.20	449.30	448.70	449.00	449.20	449.25
12				448.20	449.50	451.00	449.40	449.00	448.70	449.20	449.00	449.25
13				448.00	449.50	451.00	449.50	449.00	448.70	449.20	449.40	449.40
14				448.00	449.50	450.60	450.50	449.00	448.90	449.50	449.60	448.90
15				448.20	449.30	450.20	450.80	448.80	448.80	449.10	449.70	449.40
16				448.00	448.80	450.00	450.90	448.80	448.70	449.10	449.20	449.20
17				448.00	449.00	449.80	450.40	449.00	448.70	449.20	449.40	449.20
18				448.30	448.80	449.60	450.30	449.00	448.70	449.20	449.40	449.20
19				448.50	449.00	449.80	450.30	449.10	448.80	449.10	449.30	449.30
20				448.30	449.60	449.60	449.90	449.10	448.80	449.00	449.50	449.40
21				448.70	450.20	449.60	449.70	449.10	449.40	449.10	449.50	449.40
22				448.30	450.50	449.40	449.00	449.00	449.50	449.10	449.40	448.90
23				448.30	450.70	449.60	449.50	448.90	449.40	449.80	449.10	449.30
24				448.40	450.20	449.70	449.20	448.90	449.30	449.80	449.30	449.20
25				448.50	450.00	449.60	449.20	449.00	449.90	449.70	449.40	448.90
26				448.50	450.00	449.30	449.00	449.00	449.80	449.60	449.50	448.90
27				448.70	449.80	449.60	449.00	448.80	448.50	449.55	449.50	448.70
28				448.50	449.60	449.50	449.00	448.80	448.40	449.60	449.40	448.60
29				448.50	450.30	449.60	449.00	448.70	448.40	449.40	449.25	448.95
30				448.50	450.00	449.50	449.50	448.70	448.50	449.60	449.00	448.70
31					450.00		449.40	448.50		449.60		448.85

* For 1915 records see page 316.

TABLE 47

WATER LEVELS—RAINY RIVER—RAINY RIVER, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. Datum]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1912												
1	.....	.....	.....	.....	.....	446.23	446.43	447.13	447.53	448.63	448.48	448.43
2	.....	.....	.....	.....	.....	446.13	446.38	447.03	447.43	448.43	448.43	448.43
3	.....	.....	.....	.....	.....	446.43	446.43	446.98	447.48	448.43	448.38	448.43
4	.....	.....	.....	.....	.....	446.53	446.43	446.88	447.43	448.38	448.38	448.43
5	.....	.....	.....	.....	.....	446.43	446.43	446.83	447.43	448.33	448.38	448.43
6	.....	.....	.....	.....	.....	446.58	446.43	446.83	447.43	448.38	448.33	448.43
7	.....	.....	.....	.....	.....	446.43	446.43	447.03	447.38	448.38	448.38	448.43
8	.....	.....	.....	.....	.....	446.38	446.43	447.13	447.38	448.38	448.93	448.43
9	.....	.....	.....	.....	.....	446.03	446.63	447.23	447.43	448.33	448.93	448.43
10	.....	.....	.....	.....	.....	446.03	446.63	447.23	447.43	448.33	448.53	448.43
11	.....	.....	.....	.....	.....	446.63	446.63	447.13	447.48	448.33	448.53	448.43
12	.....	.....	.....	.....	446.13	446.38	446.68	447.13	447.53	448.28	448.48	448.43
13	.....	.....	.....	.....	445.93	446.33	446.73	447.08	447.53	448.28	448.53	448.43
14	.....	.....	.....	.....	445.93	446.28	446.83	447.13	447.53	448.28	448.58	448.43
15	.....	.....	.....	.....	446.23	446.53	446.63	447.18	447.53	448.28	448.48	448.43
16	.....	.....	.....	.....	445.98	446.93	446.73	447.08	447.53	448.33	448.43	448.43
17	.....	.....	.....	.....	446.13	446.13	447.28	447.13	447.63	448.38	448.53	448.43
18	.....	.....	.....	.....	446.28	446.38	446.83	447.13	447.73	448.53	448.48	448.48
19	.....	.....	.....	.....	446.13	446.48	446.63	447.18	447.93	448.48	448.43	448.48
20	.....	.....	.....	.....	446.08	446.33	446.83	447.13	448.18	448.38	448.53	448.48
21	.....	.....	.....	.....	446.13	446.43	446.88	447.08	448.43	448.33	448.63	448.48
22	.....	.....	.....	.....	446.18	446.43	446.83	447.13	448.83	448.33	448.73	448.48
23	.....	.....	.....	.....	446.23	446.43	446.83	447.18	448.93	448.38	448.93	448.53
24	.....	.....	.....	.....	446.18	446.43	446.83	447.23	448.93	448.43	448.93	448.53
25	.....	.....	.....	.....	446.13	446.53	447.23	447.13	449.03	448.48	448.83	448.53
26	.....	.....	.....	.....	446.13	446.53	446.83	447.23	449.03	448.43	448.73	448.53
27	.....	.....	.....	.....	445.98	446.43	447.03	447.28	448.83	448.43	448.68	448.53
28	.....	.....	.....	.....	446.53	446.23	446.93	447.38	448.73	448.48	448.63	448.53
29	.....	.....	.....	.....	446.13	446.43	447.03	447.43	448.69	448.48	448.53	448.53
30	.....	.....	.....	.....	445.98	446.43	447.13	447.43	448.73	448.48	448.43	448.48
31	.....	.....	.....	.....	446.13	.....	447.18	447.53	.....	448.43	.....	448.48
1913												
1	448.48	448.48	448.43	448.48	448.83	448.88	448.33	448.63	448.03	.....	.....	449.31
2	448.48	448.48	448.43	448.48	448.88	448.93	448.38	448.53	448.13	.....	.....	449.34
3	448.48	448.43	448.43	448.48	448.83	448.88	448.43	448.58	448.03	.....	.....	449.33
4	448.53	448.43	448.43	448.48	448.88	449.03	448.43	448.58	448.08	.....	.....	449.37
5	448.53	448.43	448.43	448.48	448.88	449.03	448.48	448.63	448.03	.....	.....	449.41
6	448.53	448.43	448.38	448.48	448.88	449.63	448.53	448.58	448.03	.....	.....	450.73
7	448.53	448.43	448.38	448.43	448.93	448.83	448.53	448.48	.....	.....	.....	450.07
8	448.53	448.43	448.38	448.43	449.08	448.83	449.03	448.33	.....	.....	.....	449.26
9	448.53	448.48	448.38	448.43	449.03	448.63	448.83	448.43	.....	.....	.....	449.36
10	448.58	448.48	448.43	448.48	448.93	448.63	448.83	448.53	.....	.....	.....	449.38
11	448.58	448.48	448.43	448.48	448.93	448.73	448.88	448.48	.....	.....	.....	449.41
12	448.58	448.53	448.43	448.43	448.98	448.63	448.93	448.43	.....	.....	.....	449.48
13	448.53	448.53	448.43	448.53	448.98	448.63	448.88	448.43	.....	.....	.....	449.37
14	448.53	448.53	448.43	448.53	449.03	448.63	448.73	448.48	.....	.....	.....	449.43
15	448.53	448.53	448.43	448.63	449.08	448.63	448.63	448.53	.....	.....	.....	449.37
16	448.53	448.48	448.43	448.63	449.03	448.83	448.63	448.58	.....	.....	.....	449.33
17	448.53	448.48	448.43	448.83	449.03	448.73	448.63	448.58	.....	.....	.....	449.37
18	448.58	448.53	448.43	448.93	448.93	448.68	448.73	448.58	.....	.....	.....	449.39
19	448.58	448.53	448.38	448.83	448.83	448.73	448.73	448.53	.....	.....	.....	449.38
20	448.58	448.53	448.38	448.73	448.83	448.63	448.83	448.43	.....	.....	.....	449.39
21	448.58	448.48	448.38	448.73	449.03	448.63	448.88	448.48	.....	.....	.....	449.38
22	448.53	448.48	448.43	448.78	448.93	448.53	449.03	448.43	.....	.....	.....	449.39
23	448.53	448.48	448.43	448.83	448.93	448.43	448.88	448.33	.....	.....	.....	449.38
24	448.53	448.48	448.43	448.88	448.93	448.33	448.73	448.23	.....	.....	.....	449.39
25	448.53	448.43	448.48	448.93	448.88	448.33	448.68	448.53	.....	.....	.....	449.39
26	448.53	448.43	448.48	448.83	448.83	448.33	448.73	448.58	.....	.....	.....	449.39
27	448.53	448.43	448.48	448.83	448.83	448.38	448.63	448.43	.....	.....	.....	449.37
28	448.48	448.43	448.48	448.78	448.88	448.28	448.63	448.38	.....	.....	449.25	449.37
29	448.48	.....	448.48	448.73	448.78	448.33	448.73	448.33	.....	.....	449.30	449.37
30	448.48	.....	448.48	448.78	448.63	448.28	448.68	448.23	.....	.....	449.34	449.38
31	448.48	.....	448.48	.....	448.83	.....	448.63	448.43	.....	.....	.....	449.37

* TABLE 47—Continued

WATER LEVELS—RAINY RIVER—RAINY RIVER, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. Datum]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1914												
1	449.37	.....	447.70	.....	447.85	448.90	448.80	448.80	448.20	447.90	448.50	448.40
2	449.38	.....	447.70	.....	447.95	448.95	448.80	448.80	448.20	447.90	448.70	448.50
3	449.38	.....	447.70	.....	448.05	448.90	448.90	448.70	448.20	447.90	448.60	448.50
4	449.35	.....	447.70	.....	448.15	449.00	448.90	448.80	448.10	448.00	448.90	448.50
5	449.37	.....	447.70	.....	448.15	449.10	448.70	448.70	448.00	448.10	448.50	448.50
6	449.37	.....	447.70	.....	448.25	449.10	448.65	448.60	447.90	448.10	448.10	448.50
7	449.37	.....	447.70	.....	448.40	449.10	448.70	448.60	447.90	448.10	449.00	448.50
8	449.37	.....	447.70	.....	448.35	449.10	448.80	448.50	447.90	448.10	448.20	448.50
9	.....	.....	447.70	.....	448.30	449.10	448.90	448.50	447.70	448.20	448.10	448.50
10	.....	.....	447.60	.....	448.50	449.10	448.80	448.40	447.90	448.60	448.50	448.50
11	.....	.....	447.65	.....	448.35	449.25	448.70	448.40	447.90	448.60	448.50	448.50
12	.....	.....	447.65	.....	448.35	449.30	448.80	448.40	447.70	448.60	448.40	448.50
13	.....	.....	447.65	.....	448.45	449.30	448.90	448.60	447.60	448.30	448.50	448.40
14	.....	447.70	447.65	.....	448.35	449.30	448.90	448.50	447.80	448.10	448.50	448.40
15	.....	447.65	447.65	.....	448.35	449.30	449.00	448.50	447.70	448.40	448.80	448 40
16	.....	447.65	447.65	.....	448.25	449.35	449.00	448.40	448.20	448.20	449.00	448.40
17	.....	447.65	447.65	.....	448.00	449.25	449.30	448.40	448.00	448.40	448.40	448.50
18	.....	447.65	447.65	.....	448.00	449.30	449.70	448.30	448.10	448.20	448.80	448.50
19	.....	447.65	447.65	.....	448.15	449.30	449.80	448.20	447.90	448.30	448.50	448.50
20	.....	447.65	447.65	.....	448.45	449.30	449.70	448.20	448.00	448.30	448.50	448.50
21	.....	447.70	447.60	.....	448.75	449.30	449.50	448.20	448.90	448.40	448.50	448.40
22	.....	447.70	447.60	.....	448.75	449.30	449.50	448.30	449.00	448.20	448.40	448.50
23	.....	447.70	447.60	.....	448.75	449.20	449.40	448.40	448.20	448.80	448.40	448.40
24	.....	447.70	447.60	.....	448.50	449.30	449.40	448.20	448.30	448.30	448.50	448.50
25	.....	447.70	447.60	447.75	448.50	449.30	449.40	448.10	448.10	449.30	448.50	448.50
26	.....	447.70	447.60	447.90	448.80	449.25	449.30	448.20	448.10	448.60	448.60	448.40
27	.....	447.70	447.60	448.00	448.70	449.30	449.30	448.10	447.80	448.20	448.50	448.40
28	.....	447.70	447.60	447.90	448.50	449.30	449.20	448.00	447.80	448.60	448.50	448.40
29	.....	.....	447.60	447.80	448.90	449.30	449.10	448.10	447.80	448.50	448.40	448.40
30	.....	.....	447.60	447.80	448.75	449.30	449.00	448.20	448.10	448.30	448.40	448.40
31	.....	.....	447.60	.....	448.90	.....	449.00	448.20	.....	448.40	.....	448.40

* TABLE 48

WATER LEVELS—RAINY RIVER—PINEWOOD, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. Datum]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1914												
1	.....	.....	.....	.....	.....	.....	.....	449.00	448.50	448.30	449.60	448.80
2	.....	.....	.....	.....	.....	.....	.....	449.00	448.40	448.30	449.60	448.80
3	.....	.....	.....	.....	.....	.....	.....	448.70	448.40	448.30	449.70	448.80
4	.....	.....	.....	.....	.....	.....	.....	449.10	448.30	448.60	449.60	448.80
5	.....	.....	.....	.....	.....	.....	.....	448.90	448.30	448.60	449.70	448.90
6	.....	.....	.....	.....	.....	.....	.....	448.70	448.10	448.90	449.90	448.90
7	.....	.....	.....	.....	.....	.....	.....	448.70	448.10	448.90	450.10	448.90
8	.....	.....	.....	.....	.....	.....	.....	448.70	448.20	449.00	448.70	448.90
9	.....	.....	.....	.....	.....	.....	.....	448.70	448.10	449.00	448.60	448.90
10	.....	.....	.....	.....	.....	.....	.....	448.60	448.20	449.10	448.70	448.90
11	.....	.....	.....	.....	.....	.....	.....	448.60	448.20	449.20	448.70	448.90
12	.....	.....	.....	.....	.....	.....	.....	448.50	448.20	449.20	448.70	448.90
13	.....	.....	.....	.....	.....	.....	448.80	449.00	448.20	449.10	448.60	448.90
14	.....	.....	.....	.....	.....	.....	448.80	448.70	448.20	449.30	448.50	448.90
15	.....	.....	.....	.....	.....	.....	449.80	448.50	448.10	449.00	448.60	448.90
16	.....	.....	.....	.....	.....	.....	449.90	448.60	448.20	448.90	448.70	448.90
17	.....	.....	.....	.....	.....	.....	450.20	448.60	448.20	449.00	448.90	448.90
18	.....	.....	.....	.....	.....	.....	450.50	448.40	448.30	449.00	448.80	448.90
19	.....	.....	.....	.....	.....	.....	450.40	448.40	448.30	449.00	448.80	448.90
20	.....	.....	.....	.....	.....	.....	450.50	448.40	448.20	449.00	448.70	448.80
21	.....	.....	.....	.....	.....	.....	449.80	448.40	448.20	449.20	448.70	448.70
22	.....	.....	.....	.....	.....	.....	449.80	448.40	448.30	448.90	448.70	448.70
23	.....	.....	.....	.....	.....	.....	449.76	448.60	448.30	448.90	448.70	448.70
24	.....	.....	.....	.....	.....	.....	449.74	448.20	448.30	449.00	448.80	448.60
25	.....	.....	.....	.....	.....	.....	449.70	448.20	448.40	449.40	448.90	448.60
26	.....	.....	.....	.....	.....	.....	449.50	448.40	448.40	449.40	448.80	448.60
27	.....	.....	.....	.....	.....	.....	449.60	448.30	448.40	449.50	448.80	448.50
28	.....	.....	.....	.....	.....	.....	449.50	448.20	448.50	449.50	448.70	448.50
29	.....	.....	.....	.....	.....	.....	449.20	448.40	448.50	449.60	448.70	448.40
30	.....	.....	.....	.....	.....	.....	449.10	448.50	448.40	449.60	448.70	448.40
31	.....	.....	.....	.....	.....	.....	449.10	448.50	.....	449.60	.....	448.40

* For 1915 records see page 318.

TABLE 49

WATER LEVELS—RAINY RIVER—NEAR BAUDETTE, MINN.

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

1912	August		September		October		November		December	
	Gauge Height	D.P.W. Datum	Gauge Height	D.P.W. Datum	Gauge Height	D.P.W. Datum	Gauge Height	D.P.W. Datum	Gauge Height	D.P.W. Datum
1			1.85	447.09	2.87	448.11	3.15	448.39		
2			1.99	447.23	2.97	448.21	3.02	448.26		
3			1.92	447.16	3.00	448.24	3.00	448.24		
4			1.99	447.23	2.89	448.13	3.24	448.48		
5			1.99	447.23	2.86	448.10	3.04	448.28		
6			2.00	447.24	3.19	448.43	2.98	448.22		
7			2.04	447.28	2.92	448.16	3.01	448.25		
8			2.22	447.46	3.00	448.24	3.79	449.03	2.98	448.22
9			2.28	447.52	3.21	448.45	2.99	448.23		
10			2.27	447.51	3.08	448.32	3.13	448.37		
11			2.03	447.27	3.09	448.33	3.32	448.56		
12			2.22	447.46	3.14	448.38	3.31	448.55		
13			2.28	447.52	3.01	448.25	3.19	448.43		
14			2.24	447.48	3.22	448.46	3.08	448.32		
15			2.30	447.54	3.06	448.30	3.17	448.41	3.00	448.24
16			2.30	447.54	3.04	448.28	3.32	448.56		
17			2.37	447.61	3.05	448.29	3.30	448.54		
18			2.31	447.55	3.49	448.73	3.29	448.53		
19	1.85	447.09	2.30	447.54	3.02	448.26	3.30	448.54		
20	1.83	447.07	2.29	447.53	2.86	448.10	2.79	448.03		
21	1.82	447.06	2.28	447.52	3.24	448.48	3.31	448.55		
22	2.24	447.48	2.31	447.55	3.01	448.25	3.13	448.37	3.00	448.24
23	1.76	447.00	3.05	448.29	2.51	447.75	3.35	448.59		
24	1.92	447.16	3.17	448.41	3.00	448.24	3.21	448.45		
25	1.93	447.17	3.91	449.15	3.03	448.27	3.30	448.54		
26	2.08	447.32	3.01	448.25	3.13	448.37	3.30	448.54		
27	1.83	447.07	3.00	448.24	2.99	448.23	3.35	448.59		
28	2.05	447.29	2.99	448.23	3.16	448.40				
29	1.83	447.07	2.91	448.15	4.32	449.56			3.00	448.24
30	1.94	447.18	2.88	448.12	3.41	448.65				
31	1.83	447.07			3.28	448.52				

1913	January		February		March		April		May	
1										
2			2.97	448.21						
3										
4										
5	3.00	448.24								
6										
7										
8										
9			2.97	448.21						
10										
11										
12	3.00	448.24								
13										
14										
15										
16										
17										
18										
19	2.96	448.20								
20										
21										
22										
23										
24										
25										
26	2.98	448.22								
27										
28										
29										
30										
31										

Zero of Gauge 445.24, Public Works (Canada) Datum, Aug. 16, 1912.

TABLE 50

WATER LEVELS—LAKE OF THE WOODS—OAK POINT, MINN.

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. Datum]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1914.												
1						448.90						
2						448.90						
3						448.90						
4						448.90						
5						448.90						
6						448.90						
7						448.90						
8						448.90						
9						449.05						
10						449.20						
11						449.20						
12						449.30						
13						449.20						
14						449.20						
15						449.20						
16						449.20						
17						449.00						
18						449.20						
19						449.20						
20						449.20						
21						449.20						
22						449.10						
23						449.05						
24						449.20						
25						449.20						
26						449.10						
27						449.20						
28						449.20						
29						449.20						
30						449.20						
31												

TABLE 51

WATER LEVELS—LAKE NAMAKAN—KETTLE FALLS

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. Datum]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1									499.96	499.62	499.06	498.53
2									499.92	499.53	499.01	498.53
3									499.86	499.51	498.98	498.53
4									499.86	499.55	498.97	498.53
5									500.05	499.56	498.93	498.53
6									500.03	499.57	498.91	498.53
7									500.03	499.58	498.88	498.52
8								500.67	500.03	499.55	498,85	498.48
9									500.13	499.53	498.85	498.43
10								500.67	500.13	499.51	498.83	498.43
11								500.66	500.13	499.50	498.82	498.43
12								500.56	500.13	499.49	498.82	498.43
13								500.66	500.11	499.48	498.81	498.23
14								500.49	500.04	499.48	498.78	498.23
15								500.47	500.03	499.43	498.76	498.23
16								500.41	500.01	499.41	498.81	498.13
17								500.40	499.95	499.40	498.78	498.13
18								500.38	499.92	499.35	498.73	498.13
19								500.34	499.85	499.28	498.75	498.33
20								500.31	499.85	499.27	498.78	498.33
21								500.29	499.81	499.25	498.73	498.33
22								500.23	499.79	499.23	498.71	498.33
23								500.18	499.73	499.20	498.69	498.23
24								500.17	499.75	499.19	498.67	498.23
25								500.14	499.75	499.16	498.65	498.23
26								500.08	499.73	499.13	498.63	498.23
27								500.06	499.68	499.11	498.69	498.23
28								500.08	499.68	499.05	498.73	498.23
29								500.06	499.71	499.03	498.63	498.23
30								500.04	499.64	499.05	498.69	498.23
31								500.02		499.10		498.23

* TABLE 51—Continued

WATER LEVELS—LAKE NAMAKAN—KETTLE FALLS

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. Datum]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1913												
1	498.23	497.93	497.63	497.56	499.98	503.63	503.73	502.08	500.43	499.43	....	499.22
2	498.23	497.93	497.63	497.59	500.08	503.83	503.68	501.93	500.33	499.41	....	499.25
3	498.13	497.93	497.63	497.58	500.18	504.01	503.58	501.98	500.33	499.33	....	499.28
4	498.13	497.93	497.63	497.58	500.28	504.11	503.51	501.88	500.33	499.33	.....	499.30
5	498.13	497.93	497.63	497.59	500.38	504.27	503.55	501.78	500.33	499.43	499.22	499.30
6	498.13	497.93	497.63	497.59	500.38	504.35	503.48	501.73	500.23	499.33	499.20	499.34
7	498.13	497.93	497.63	497.59	500.53	504.43	503.38	501.68	500.13	499.43	499.20	499.30
8	498.13	497.83	497.63	497.59	500.68	504.45	503.38	501.63	500.03	499.43	499.22	499.30
9	498.13	497.83	497.63	497.60	500.75	504.49	503.33	501.53	500.03	499.43	499.16	499.30
10	498.13	497.83	497.53	497.60	500.83	504.55	503.33	501.51	500.13	499.48	499.15	499.30
11	498.13	497.83	497.53	497.60	500.93	504.55	503.23	501.45	500.11	499.51	499.15	499.30
12	498.13	497.83	497.57	497.61	501.13	504.55	503.18	501.41	500.08	499.55	499.15	499.30
13	498.13	497.83	....	497.65	501.05	504.55	503.13	501.23	500.03	498.70	499.15	499.30
14	498.13	497.83	....	497.81	501.13	504.55	503.11	501.18	499.93	498.70	499.12	499.28
15	498.13	497.83	497.61	497.91	501.33	504.55	503.11	501.18	499.89	498.75	499.10	499.28
16	498.13	497.83	497.61	498.05	501.43	504.53	503.11	501.18	499.83	498.72	499.10	499.28
17	498.13	497.73	497.60	498.18	501.55	504.43	503.11	501.18	499.81	498.72	499.08	499.25
18	498.13	497.73	497.60	498.33	501.63	504.33	503.08	501.20	499.78	498.70	499.08	499.25
19	498.13	497.73	497.60	498.43	501.73	504.33	502.93	501.03	499.83	.....	499.10	499.24
20	498.03	497.73	497.59	498.61	501.78	504.23	502.93	501.01	499.73	.....	499.06	499.24
21	498.03	497.73	497.59	498.73	501.93	504.15	502.93	500.93	499.63	.....	499.12	499.20
22	498.03	497.73	497.59	498.83	502.03	504.15	502.88	500.93	499.63	.....	499.10	499.20
23	498.03	497.73	497.60	498.98	502.15	504.11	502.75	500.83	499.61	.....	499.15	499.18
24	498.03	497.73	497.61	499.08	502.23	504.09	502.65	500.73	499.58	.....	499.14	499.15
25	498.03	497.73	497.62	499.23	502.33	504.07	502.59	500.69	499.58	.....	499.15	499.15
26	498.03	497.63	497.61	499.38	502.48	504.03	502.55	500.67	499.56	.....	499.10	499.15
27	498.03	497.63	497.61	499.48	502.58	503.93	502.48	500.63	499.53	.....	499.15	499.12
28	497.93	497.63	497.61	499.63	502.71	503.83	502.33	500.58	499.51	.....	499.14	499.12
29	497.93	.....	497.60	499.75	502.83	503.83	502.28	500.51	499.49	.....	499.20	499.12
30	497.93	.....	497.58	499.83	506.11	503.85	502.18	500.48	.....	.....	499.22	499.10
31	497.93	.....	497.56	.....	503.38	.....	502.13	500.43	.....	.....	.....	499.08
1914												
1	499.06	498.75	498.50	498.48	500.70	506.66	508.65	508.73	508.24	506.80	504.70	503.10
2	499.06	498.75	498.50	498.48	500.90	506.70	508.61	508.72	508.20	506.72	504.62	503.05
3	499.06	498.72	498.50	498.48	501.10	506.90	508.56	508.72	508.15	506.62	504.52	503.00
4	499.06	498.72	498.44	498.50	501.32	506.99	508.55	508.72	508.10	506.52	504.47	503.00
5	499.04	498.72	498.44	498.50	501.60	507.27	508.53	508.71	508.09	506.45	504.42	502.95
6	499.04	498.72	498.42	498.50	501.80	507.39	508.53	508.66	508.04	506.40	504.35	502.85
7	499.00	498.72	498.42	498.52	502.00	507.42	508.50	508.64	508.01	506.30	504.27	502.80
8	.....	498.72	498.42	498.52	502.24	507.50	508.54	508.61	507.96	506.20	504.27	502.80
9	.....	498.70	498.42	498.52	502.40	507.78	508.54	508.63	507.90	506.15	504.25	502.75
10	.....	498.70	498.38	498.52	502.60	508.04	508.54	508.65	507.94	506.08	504.20	502.70
11	.....	.....	498.38	498.52	502.80	508.13	508.56	508.68	507.90	506.00	504.10	502.70
12	.....	.....	498.38	498.52	502.90	508.34	508.60	508.66	507.87	505.95	504.05	502.65
13	.....	.....	498.38	498.52	503.10	508.44	508.63	508.66	507.86	505.89	504.00	502.55
14	.....	.....	498.38	498.54	503.14	508.61	508.65	508.63	507.84	505.83	504.00	502.55
15	.....	.....	498.38	498.58	503.28	508.71	508.68	508.59	507.83	505.75	504.00	502.55
16	.....	.....	498.38	498.60	503.40	508.84	508.77	508.59	507.82	507.67	503.95	502.45
17	.....	.....	498.40	498.70	503.50	508.92	508.75	508.58	507.79	507.63	503.88	502.45
18	.....	.....	498.80	505.60	508.92	508.75	508.55	507.80	507.55	503.80	502.40	
19	.....	.....	498.40	499.00	503.90	508.90	508.75	508.53	507.82	507.50	503.77	502.35
20	.....	.....	498.40	499.14	504.20	508.90	508.73	508.53	507.78	507.45	503.70	502.30
21	.....	.....	498.40	499.28	504.47	508.88	508.70	508.49	507.76	505.40	503.65	502.30
22	.....	.....	498.40	499.38	504.77	508.88	508.68	508.46	507.70	505.33	503.55	502.25
23	.....	.....	498.40	499.46	505.03	508.83	508.68	508.43	507.60	505.33	503.50	502.20
24	.....	.....	498.38	499.60	505.28	508.80	508.69	508.42	507.50	505.30	503.45	502.20
25	.....	.....	498.38	499.70	505.47	508.75	508.70	508.37	507.38	505.20	503.40	502.20
26	498.92	....	498.45	499.84	505.72	508.72	508.67	508.39	507.25	505.15	503.35	502.15
27	498.80	....	498.48	499.94	505.93	508.75	508.69	508.37	507.17	505.07	503.30	502.10
28	498.80	....	498.48	500.16	506.05	508.70	508.71	508.34	507.07	505.00	503.25	502.10
29	498.80	.....	498.48	500.34	506.38	508.65	508.75	508.31	507.00	504.95	503.20	502.05
30	498.75	.....	498.48	500.50	506.43	508.60	508.75	508.29	506.90	504.90	503.15	502.05
31	498.75	.....	498.48	.....	506.50	.....	508.75	508.21	.....	504.85	.....	502.00

* For 1915 records see page 319.

* TABLE 52

WATER LEVELS—VERMILION LAKE—TOWER, MINN.

RECORDS OF INTERNATIONAL JOINT COMMISSION

1913

Date	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1											‡3.80	
2											3.75	
3											3.75	
4											3.70	
5											3.75	
6											3.80	
7											3.80	
8											3.70	
9											3.75	
10										3.65	4.00	
11										†3.71	3.98	
12										3.70	3.95	
13										3.75	3.95	
14										3.75	3.80	
15										3.80		
16										3.75	3.80	
17										3.77	3.80	
18										3.80	3.75	
19										3.80	3.70	
20										3.75	3.70	
21										3.75	3.70	
22										3.80	3.75	
23										3.70	3.80	
24										3.70	3.80	
25										3.70	§3.85	
26										3.75		
27										3.80		
28										3.80		
29										3.80		
30										3.80		
31										3.80		

1914

1	3.70	3.70	.....	3.60	4.29	4.35	3.78	3.55	3.25	3.20	2.90	2.80
2	3.70	3.70	.....	3.60	4.42	4.32	3.75	3.55	3.40	3.20	2.90	2.80
3	3.70	3.70	.....	3.60	4.49	4.30	3.71	3.55	3.35	3.20	3.00	2.75
4	3.65	3.70	.....	3.60	4.57	4.23	3.70	3.50	3.30	3.20	3.10	2.75
5	3.65	3.70	.....	3.60	4.58	4.20	3.70	3.50	3.20	3.18	3.00	2.75
6	3.65	3.70	.....	3.60	4.61	4.16	3.73	3.50	3.20	3.18	3.10	2.75
7	3.68	3.70	.....	3.60	4.66	4.15	3.74	3.45	3.10	3.20	3.10	2.75
8	3.68	3.70	.....	3.60	4.74	4.20	3.70	3.45	3.00	3.10	2.90	2.72
9	3.68	3.70	.....	3.60	4.79	4.32	3.68	3.40	2.85	3.10	2.90	2.75
10	3.65	3.70	.....	3.60	4.82	4.30	3.70	3.40	2.00	3.10	2.90	2.80
11	3.80	3.70	.....	3.60	4.79	4.30	3.70	3.40	2.55	3.10	2.90	2.80
12	3.75	3.70	.....	3.60	4.79	4.25	3.71	3.40	2.60	3.10	3.00	2.80
13	3.70	3.70	.....	3.58	4.79	4.15	3.80	3.40	2.00	3.00	3.00	2.80
14	3.70	3.70	.....	3.59	4.76	4.15	3.85	3.38	3.20	3.02	2.90	2.85
15	3.70	3.70	.....	3.60	4.75	4.15	3.82	3.35	3.20	3.10	2.90	2.85
16	3.70	3.70	.....	3.60	4.70	4.10	3.85	3.30	3.00	3.10	2.90	2.80
17	3.70	3.70	.....	3.62	4.62	4.00	3.70	3.30	3.10	3.10	2.90	2.80
18	3.70	3.70	.....	3.62	4.65	4.00	3.72	3.30	3.20	3.15	2.80	2.80
19	3.70	3.70	.....	3.70	4.62	4.00	3.68	3.30	3.20	3.15	2.80	2.80
20	3.70	3.70	.....	3.74	4.60	3.95	3.68	3.30	3.20	3.20	2.80	2.90
21	3.70	3.70	.....	3.74	4.60	3.90	3.68	3.30	3.20	3.20	2.80	2.90
22	3.70	.....	.....	3.78	4.55	3.88	3.70	3.30	3.30	3.20	2.80	2.85
23	3.70	.....	.....	3.80	4.55	3.85	3.72	3.25	3.20	3.15	2.80	2.85
24	3.70	.....	.....	3.84	4.45	3.85	3.72	3.25	3.20	3.10	2.90	2.80
25	3.70	.....	.....	3.90	4.48	3.80	3.75	3.20	3.10	3.00	2.90	2.80
26	3.70	.....	.....	3.93	4.54	3.78	3.80	3.20	3.10	3.00	2.80	2.80
27	3.70	.....	.....	3.96	4.40	3.72	3.80	3.20	3.10	3.00	2.80	2.80
28	3.70	.....	.....	4.05	4.45	3.75	3.75	3.25	3.10	2.90	2.80	2.85
29	3.70	.....	.....	4.16	4.54	3.80	3.60	3.25	3.15	2.90	2.80	2.85
30	3.70	.....	.....	4.24	4.45	3.80	3.50	3.20	3.20	2.90	2.80	2.80
31	3.70	.....	.....	.....	4.40	.....	3.55	3.20	.....	2.90	.....	2.70

* For 1915 records see page 329.
† Rise in water due to heavy rain and high winds preceding night and morning of Oct. 11, 1913.
‡ Water and ice rubbed off figures on gauge. Made temporary gauge to register.
§ Sudden high winds. Increased height.

TABLE 53

DISCHARGE MEASUREMENTS WINNIPEG RIVER AT NORTH TUNNEL ISLAND STATION

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

Date	Hydrographer	Width Feet	Area Sq. Ft.	Mean Velocity, Ft. per Sec.	Water Level, Sea-level Datum		Discharge c. f. s.		
					At Bridge	At Meter Section	Tunnel Island	Kenora	Total
1912									
June 28	Scovil	156	4115	1.05	1033.93		4340	1198	5538
July 17	do	155	4080	.94	33.91		3851	1049	4900
27	do	155	4054	.97	34.03		3952	1157	5109
28	do	155	4017	.83	33.89		3330	632	3962
30	do	155	4033	1.02	34.03		4126	1099	5225
Aug. 14	Worden	158	4149	1.12	34.28		4647	1242	5889
29	do	159	4171	1.13	34.35		4714	1245	5959
Sept. 26	Richardson	159	4190	1.22	34.74		5131	643	5774
Oct. 5	do	160	4346	1.79	35.73		7798	1157	8955
11	Pirie	161	4480	1.81	36.49		8510	1186	9696
12	do	161	4480	1.84	36.54		8230	1213	9443
16	do	163	4508	1.99	36.69		8993	1197	10190
18	do	163	4558	2.20	37.05		10048	1206	11254
Nov. 20	Lamb	164	4563	1.90	37.13		8670	943	9613
25	do	164	4588	2.14	37.15		9819	965	10784
26	do	164	4588	2.08	37.24		9544	1300	10844
1913									
Feb. 22	Lamb	163	4253	1.33	35.33		5654	1364	7018
23	do	163	4232	1.19	35.08		5033	948	5981
Mar. 12	do	163	4240	1.39	35.23		5909	1309	7218
20	do	163	4256	1.43	35.28		6107	1293	7400
21	do	163	4256	1.40	35.31		5978	1300	7278
22	do	163	4256	1.41	35.30		6052		
22	do	163	4256	1.41	35.30		6030	1354	7395
27	do	162	4224	1.32	35.05		5562		
27	do	163	4224	1.33	35.05		5615	1312	6900
28	do	163	4224	1.35	35.05		5731		
28	do	163	4224	1.30	35.03		5476	1310	6913
31	do	163	4177	1.24	34.76		5197	911	6108
Apr. 8	do	162	4190	1.36	34.89		5714	1060	6774
12	do	161	4206	1.39	34.96		5835	664	6499
14	do	160	4171	1.25	34.73		5194	645	5839
16	do	162	4206	1.42	34.99		5963	936	6899
June 24	do	182	5250	3.56	41.17		18701	1227	19928
28	do	182	5267	3.49	41.28		18420	1348	19768
July 11	Emery	173	4930	2.46	39.34		12115	1233	13348
14	do	170	4797	2.54	38.69		12215	1009	13224
15	do	179	4798	2.48	38.80		11880	1207	13087
Aug. 1	do	174	4986	3.01	39.70		15024	845	15869
5	do	174	4982	2.80	39.63		13947	711	14658
6	do	174	4983	2.85	39.64		14216	697	14913
21	Lamb	173	4915	2.85	39.43		14039	687	14726
26	do	172	4915	2.86	39.33	1039.12	14068		
26	do	172	4899	2.86	39.32	39.11	14009		
26	do	172	4899	2.82	39.32	39.11	13817	694	14659
27	do	172	4916	2.96	39.36	39.13	14530		
27	do	172	4916	2.89	39.36	39.13	14174	705	15057
28	do	172	4916	2.83	39.38	39.15	13916		
28	do	172	4916	2.77	39.38	39.16	13606		
28	do	173	4916	2.78	39.38	39.16	13652		
28	do	173	4916	2.79	39.38	39.15	13729	695	14421
29	do	172	4898	2.86	39.32	39.12	13991		
29	do	172	4898	2.90	39.32	39.12	14176		
29	do	172	4898	2.86	39.32	39.12	14003		
29	do	172	4898	2.84	39.32	39.12	13907		
29	do	172	4899	2.75	39.32	39.12	13423		
29	do	172	4898	2.82	39.32	39.12	13787	701	14582
30	do	172	4898	2.90	39.34	39.12	14180		
30	do	172	4898	2.88	39.33	39.14	14087	699	14832
31	do	172	4881	2.72	39.19	39.01	13234		
31	do	172	4881	2.76	39.17	38.96	13501	666	14033
Sept. 1	do	172	4881	2.83	39.19	39.01	13820		
1	do	172	4881	2.85	39.23	39.03	13956	672	14560
2	do	172	4881	2.79	39.20	39.03	13644		
2	do	172	4881	2.81	39.20	39.02	13736	689	14379
3	do	172	4881	2.74	39.20	39.00	13382		
3	do	172	4881	2.77	39.20	39.00	13501	699	14140

When several discharge measurements were made on the same date, the average was combined with the Kenora discharge to obtain the total discharge. (Engrs.)

TABLE 53—Continued

DISCHARGE MEASUREMENTS –WINNIPEG RIVER AT NORTH TUNNEL ISLAND STATION—Continued

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

Date.	Hydrographer	Width Feet	Area Sq. Ft.	Mean velocity, Ft. per Sec.	Water Level, Sea-level Datum		Discharge c. f. s.		
					At Bridge	At Meter Section	Tunnel Island	Kenora	Total
1913									
Sept. 4	Lamb	172	4850	2.87	1039.21	1039.04	13901	704	14605
5	do	172	4850	2.78	39.20	38.99	13488		
5	do	172	4850	2.82	39.20	39.01	13719		
5	do	172	4850	2.77	39.20	39.01	13416	702	14243
6	do	172	4850	2.72	39.20	39.01	13208		
6	do	172	4850	2.76	39.20	39.01	13376	695	13987
7	do	172	4833	2.76	39.07	38.89	13300		
7	do	172	4833	2.71	39.05	38.88	13066	661	13844
8	do	172	4816	2.73	39.07	38.86	13125		
8	do	172	4833	2.64	39.07	38.88	12786	692	13637
21	do	171	4799	2.38	38.90	38.74	11427		
21	do	171	4782	2.39	38.79	38.66	11411	786	12205
22	do	171	4782	2.65	38.96	38.64	12637		
22	do	171	4782	2.50	38.83	38.68	11917	1159	13436
23	do	166	4725	2.21	38.37	38.29	10414		
23	do	166	4709	2.09	38.37	38.26	9826	1339	11465
24	do	165	4660	2.00	38.00	37.91	9302		
24	do	166	4660	1.98	37.99	37.89	9215	1348	10606
25	do	165	4627	2.00	37.80	37.73	9249		
25	do	165	4627	2.00	37.80	37.72	9249	1325	10574
26	do	165	4631	1.98	37.71	37.62	9178		
26	do	165	4631	2.00	37.71	37.62	9294	1320	10553
27	do	165	4586	1.98	37.49	37.44	9054		
27	do	165	4582	1.86	37.49	37.42	8465	1313	10073
28	do	163	4480	1.45	36.90	36.83	6494		
28	do	163	4526	1.46	36.83	36.81	6603	709	7258
29	do	162	4432	1.62	36.59	36.53	7188		
29	do	162	4432	1.60	36.61	36.55	7408	1120	8418
30	do	162	4396	1.67	36.66	36.59	7337	1241	8576
Oct. 1	do	162	4432	1.60	36.58	36.51	7101	1305	8408
2	Budge	162	4416	1.70	36.58	36.43	7511		
2	do	162	4416	1.58	36.58	36.41	6984	1310	8557
3	do	162	4400	1.61	36.41	36.36	7190		
3	do	162	4400	1.68	36.41	36.36	7491	1300	8552
4	do	162	4400	1.59	36.38	36.33	7014		
4	do	162	4400	1.63	36.38	36.32	7173	1335	8428
5	do	161	4367	1.41	36.22	36.08	6171		
5	do	161	4346	1.45	36.06	36.03	6316	735	6979
6	do	161	4335	1.60	36.08	35.96	6937	1065	8002
7	do	161	4367	1.58	36.18	36.14	6916	1305	8221
8	do	161	4367	1.62	36.19	36.12	7091	1350	8441
9	do	161	4367	1.61	36.14	36.11	7016	1335	8351
10	do	161	4368	1.67	36.08	36.16	7300	1240	8540
11	do	161	4367	1.61	36.16	36.16	7029	1310	8339
13	do	161	4303	1.60	35.88	35.78	6880	1145	8025
14	do	161	4335	1.61	36.10	35.96	7013	1340	8353
15	do	161	4351	1.60	36.08	36.02	6972	1350	8322
18	do	161	4351	1.64	36.09	36.02	7140	1355	8495
21	do	161	4303	1.61	35.82	35.71	6941	1395	8336
22	do	161	4319	1.58	35.91	35.83	6803	1345	8148
24	do	161	4335	1.62	36.02	35.95	7006	1345	8351
27	do	161	4272	1.55	35.80	35.67	6603	1150	7753
29	do	161	4335	1.66	35.98	35.92	7176	1375	8551
31	do	161	4335	1.65	35.98	35.96	7126	1355	8481
Nov. 5	do	160	4319	1.63	35.93	35.86	7026	1310	8336
8	do	161	4335	1.50	35.96	35.98	6771	1375	8146
11	do	161	4319	1.61	35.92	35.82	6962	1355	8317
13	do	161	4335	1.60	35.93	35.91	6933	1370	8303
15	do	161	4335	1.56	35.98	35.92	6769	1370	8139
18	do	161	4319	1.57	35.93	35.84	6765	1350	8115
20	do	161	4334	1.67	35.93	35.92	7242	1370	8612
22	do	161	4335	1.65	36.00	35.96	7150	1330	8480
25	do	160	4319	1.64	35.91	35.82	7069	1360	8429
Dec. 1	Madden	160	4323	1.63	35.76	35.75	7064	1235	8299
6	Budge	160	4315	1.55	35.85	35.95	6668	1415	8083
12	O'Grady	161	4335	1.58	35.98	35.91	6868	1405	8273
20	do	161	4365	1.65	35.87	35.76	7218	1015	8233
24	Budge	160	4372	1.60	35.87	35.81	7008	1480	8488
30	Madden	161	4365	1.67	35.85	35.80	7286		
30	Budge	161	4365	1.63	35.85	35.80	7124	1440	8645

When several discharge measurements were made on the same date, the average was combined with the Kenora discharge to obtain the total discharge. (Engrs.)

TABLE 53—Continued

DISCHARGE MEASUREMENTS—WINNIPEG RIVER AT NORTH TUNNEL ISLAND STATION—Continued

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

Date	Hydrographer	Width Feet	Area Sq. Ft.	Mean Velocity Ft. per Sec.	Water level, Sea-level Datum		Discharge c. f. s.		
					At Bridge	At Meter Section	Tunnel Island	Kenora	Total
1914									
Jan. 7	Madden	161	4351	1.55	1035.80	1035.72	6731		
7	do	161	4351	1.62	35.80	35.73	7028	840	7719
17	do	160	4365	1.61	35.87	35.83	7018	910	7928
21	O'Grady	161	4352	1.65	35.81	35.75	7077	945	8022
22	do	161	4337	1.52	35.63	35.56	6582		
22	do	161	4337	1.52	35.63	35.56	6586	970	7554
27	Madden	160	4351	1.55	35.78	35.70	6733		
27	do	160	4352	1.53	35.78	35.70	6653	965	7658
31	do	161	4365	1.61	35.86	35.80	7049	1025	8074
Feb. 2	do	160	4321	1.60	35.66	35.53	6827	885	7712
11	O'Grady	160	4367	1.52	35.84	35.80	6658	1100	7758
12	do	160	4367	1.52	35.83	35.80	6660	1085	7745
16	Madden	160	4321	1.52	35.69	35.56	6572	995	7567
18	do	160	4365	1.52	35.83	35.81	6822		
18	do	160	4365	1.52	35.84	35.81	6642	955	7687
23	do	160	4400	1.74	36.15	35.97	7665		
25	do	160	4415	1.79	36.23	36.05	7899	1050	8832
25	do	160	4494	2.00	36.79	36.63	8979		
25	do	160	4494	2.04	36.80	36.64	9153	935	10001
Mar. 2	O'Grady	162	4529	2.07	36.89	36.76	9406		
2	do	162	4543	2.06	36.99	36.86	9386	1205	10601
4	Moore	162	4576	2.04	37.11	37.11	9313		
4	do	162	4576	2.05	37.11	37.11	9399	1115	10471
6	O'Grady	162	4576	2.06	37.15	37.11	9441	1100	10541
18	do	162	4592	2.06	37.31	37.15	9436		
18	do	162	4592	2.02	37.31	37.15	9277	1130	10486
23	do	162	4544	1.96	37.07	36.90	8896		
23	do	162	4560	2.00	37.07	36.96	9160	1085	10113
28	Moore	162	4576	2.02	37.23	37.10	9256		
28	do	162	4576	2.06	37.23	37.10	9428	815	10157
30	do	162	4529	1.98	36.98	36.81	8977		
30	do	162	4529	1.96	36.98	36.86	8885	720	9651
Apr. 1	do	162	4560	2.00	37.12	36.98	9147		
1	do	162	4560	2.07	37.12	36.98	9459	710	10013
3	O'Grady	162	4560	2.04	37.18	37.01	9314		
3	do	162	4560	2.04	37.18	37.01	9323	775	10093
6	do	162	4529	1.86	37.01	36.82	8520		
6	do	162	4513	1.86	37.01	36.73	8380	790	9240
8	do	162	4560	2.04	37.13	37.02	9270		
8	do	162	4560	2.03	37.13	37.02	9137	830	10033
11	Moore	162	4527	1.85	36.95	36.81	8359	770	9129
14	O'Grady	162	4529	1.99	36.94	36.81	9047	725	9772
16	do	162	4544	1.87	37.01	36.90	8512		
16	do	162	4544	1.83	37.01	36.90	8330	920	9341
18	do	162	4529	1.90	36.99	36.86	8635	970	9605
20	Moore	162	4544	2.06	37.04	36.89	9343		
20	do	162	4544	2.02	37.04	36.93	9220	935	10216
22	O'Grady	162	4576	2.12	37.21	37.11	9694		
22	do	162	4576	2.15	37.21	37.11	9823	685	10443
23	do	162	4560	2.00	37.12	37.01	9117		
23	do	162	4560	2.02	37.12	37.01	9235	690	9866
24	do	162	4544	2.05	37.08	36.96	9336		
24	do	162	4544	2.00	37.08	36.96	9103	685	9905
27	do	162	4529	1.80	36.92	36.81	8133		
27	do	162	4529	1.85	36.92	36.83	8353	685	8928
29	Moore	162	4592	2.18	37.26	37.16	10001		
29	do	162	4592	2.11	37.26	37.16	9689	690	10535
30	do	162	4592	2.15	37.28	37.18	9879		
30	do	162	4592	2.11	37.28	37.18	9682	680	10460
May 1	do	162	4592	2.13	37.31	37.18	9762		
1	do	162	4592	2.14	37.31	37.18	9819	670	10460
2	do	162	4592	2.14	37.33	37.21	9851		
2	do	162	4592	2.08	37.33	37.21	9552	660	10361
8	do	162	4656	2.19	37.73	37.61	10184		
8	do	162	4656	2.19	37.71	37.60	10217	805	11005
11	do	162	4624	1.87	37.53	37.38	8662		
11	do	162	4624	2.09	37.53	37.44	9638	915	10065
12	Galloway	162	4656	2.14	37.71	37.63	9946		
12	do	162	4656	2.23	37.71	37.63	10342	960	11104
14	Moore	162	4671	2.23	37.86	37.71	10166		
14	do	162	4671	2.22	37.86	37.73	10391	940	11219
15	do	162	4671	2.28	37.83	37.71	10670	690	11360
16	do	162	4671	2.28	37.83	37.71	10650		
16	do	162	4671	2.13	37.76	37.63	9979	915	11230
18	do	162	4640	2.34	37.63	37.51	10880		

When several discharge measurements were made on the same date, the average was combine with the Kenora discharge to obtain the total discharge. (Engrs.)

* TABLE 53—Continued

DISCHARGE MEASUREMENTS -WINNIPEG RIVER AT NORTH TUNNEL ISLAND STATION—Continued

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

Date	Hydrographer	Width Feet	Area Sq. Ft.	Mean Velocity Ft. per Sec.	Water level, Sea-level Datum: At Bridge	At Meter Section	Discharge c. f. s.: Tunnel Island	Kenora	Total
1914									
May 18	Moore	162	4640	2.22	1037.67	1037.55	10406	655	11298
21	....do	162	4719	2.72	38.26	38.07	12123	890	13013
22	....do	162	4782	2.55	38.63	38.45	12086		
22	....do	162	4782	2.73	38.63	38.46	13055	895	13465
26	Galloway	162	4830	2.77	38.91	38.73	13352		
26	....do	162	4830	2.67	38.91	38.73	13326	895	14234
28	....do	169	4926	3.15	39.45	39.24	15527		
28	....do	169	4926	3.14	39.45	39.25	15459	860	16353
30	O'Grady	174	5022	3.21	40.01	39.73	16111		
30	....do	174	5022	3.23	40.01	39.73	16227	895	17064
June 2	Galloway	174	5041	3.16	40.06	39.84	15945		
2	....do	174	5041	3.18	40.06	39.84	16066	910	16916
4	....do	174	5081	3.22	40.26	40.12	16379		
4	....do	174	5081	3.21	40.26	40.12	16338	880	17239
10	Moore	174	5161	3.40	40.81	40.53	17665		
10	....do	174	5161	3.35	40.81	40.59	17284	885	18360
16	....do	179	5166	3.30	40.81	40.57	17071		
16	....do	179	5166	3.30	40.81	40.58	17181	860	17986
18	Galloway	179	5182	3.28	40.88	40.57	17025		
18	....do	179	5182	3.18	40.88	40.59	16499	885	17647
22	Moore	179	5217	3.45	40.89	40.71	17994		
22	....do	179	5217	3.35	40.89	40.78	17504	925	18674
25	....do	181	5273	3.66	41.51	41.13	19288		
25	....do	181	5273	3.64	41.51	41.13	19186	1000	20237
27	....do	181	5273	3.56	41.49	41.13	18764		
27	....do	181	5273	3.60	41.49	41.13	18999	995	19876
July 9	O'Grady	179	5365	3.42	41.45	41.11	18356		
9	....do	179	5365	3.59	41.45	41.11	19270	725	19538
21	Galloway	181	4992	3.85	41.53	41.16	19208		
21	....do	181	4992	3.78	41.53	41.16	18905	740	19796
30	....do	181	5223	3.68	41.46	41.16	19240		
30	....do	181	5223	3.78	41.46	41.16	19714	770	20247
Aug. 3	....do	180	5231	3.67	41.19	40.92	19192		
3	....do	180	5231	3.60	41.19	40.94	18883	750	19788
5	Moore	181	5264	3.73	41.31	41.06	19644	975	20619
13	O'Grady	177	5280	3.42	41.04	40.74	17960		
13	....do	177	5280	3.42	41.04	40.74	18069	760	18774
18	....do	177	5199	3.57	40.90	40.69	18569		
18	....do	177	5199	3.73	40.90	40.69	19372	785	19756
22	Galloway	177	5199	3.48	41.01	40.73	18078	1010	19088
Sept. 15	O'Grady	171	4827	2.67	38.72	38.55	12870		
15	....do	171	4827	2.62	38.72	38.55	12644	990	13747
22	....do	171	4834	2.56	38.78	38.61	12385	1115	13500
24	....do	171	4843	2.60	38.80	38.64	12545		
24	....do	171	4843	2.52	38.80	38.64	12217	1100	13481
29	....do	172	4817	2.58	38.63	38.49	12437	895	13332
Oct. 3	Galloway	172	4819	2.60	38.73	38.53	12530	910	13440
Nov. 3	O'Grady	163	4529	1.94	36.93	36.82	8797	927	9724
11	....do	163	4554	1.97	37.02	36.96	8970	957	9927
16	....do	163	4530	1.93	36.89	36.83	8648		
16	....do	163	4530	1.80	36.89	36.83	8151	938	9337
19	....do	163	4554	1.98	37.04	36.96	9009		
19	....do	163	4554	1.98	37.04	36.96	9032	1035	10055
23	Galloway	163	4493	1.89	36.86	36.67	8517		
23	....do	163	4506	1.96	36.86	36.67	8830	944	9617
27	....do	163	4553	1.83	37.10	36.96	8324		
27	O'Grady	163	4553	1.91	37.07	36.96	8701	995	9507
30	Galloway	163	4522	2.00	37.10	36.77	9040	909	9949
Dec. 4	....do	163	4561	2.02	37.14	37.00	9203	972	10175
9	O'Grady	163	4521	1.84	36.86	36.73	8295		
9	....do	163	4521	1.89	36.86	36.73	8530	1013	9425
14	....do	163	4514	1.98	36.82	36.73	8946	1098	10044
16	....do	163	4530	1.95	36.93	36.81	8847		
16	....do	163	4530	1.97	36.93	36.81	8921	1232	10116
19	....do	163	4537	1.94	36.95	36.81	8778	1068	9846
22	....do	163	4563	1.97	36.91	36.84	8979		
22	....do	163	4563	1.95	36.91	36.84	8891	1124	10059
24	Galloway	163	4571	1.95	36.92	36.88	8919		
24	....do	163	4571	1.94	36.92	36.88	8851	1147	10032
28	....do	163	4531	1.93	36.82	36.68	8759		
28	....do	163	4531	1.94	36.82	36.68	8807	1121	9904
31	....do	163	4563	1.94	36.95	36.87	8854		
31	....do	163	4563	1.95	36.95	36.87	8922	1093	9981

* For 1915 records see page 320.

When several discharge measurements were made on the same date, the average was combined with the Kenora discharge to obtain the total discharge. (Engrs.)

TABLE 54

DISCHARGE MEASUREMENTS—WESTERN OUTLET—LAKE OF THE WOODS ABOVE NORMAN DAM

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

Date	Hydrographer	Width Feet	Area Sq. Ft.	Mean Velocity Ft. per Sec.	Water Level Sea-level Datum	Discharge c. f. s.	Logs out of Dam
1912							
June 5	Scovil	193	4740	0.57	1058.73	2694	0
July 15	do	193	4820	0.64	59.19	3070	0
30	Richardson	193	4831	0.56	59.21	2715	0
Aug. 13	Scovil	205	4946	0.77	59.53	3823	0
30	Worden	205	4853	0.80	59.64	3863	0
Sept. 27	Richardson	205	4992	0.83	60.40	4154	0
30	do	205	5000	0.79	60.44	3993	0
Oct. 4	do	205	5090	1.38	60.59	7010	20
11	Pirie	209	5045	1.39	60.68	7027	20
12	do	209	5038	1.28	60.71	6476	20
16	do	211	5082	1.35	60.89	6874	20
18	do	211	5077	1.67	60.85	8495	30
Nov. 20	Lamb	211	4992	1.68	60.75	8386	29
27	do	211	4968	1.68	60.49	8346	29
1913							
Feb. 12	do	211	4986	1.57	60.30	7821	29
19	do	211	5028	0.85	60.37	4259	29
Mar. 10	do	211	4951	0.89	60.45	4443	1
11	do	211	4930	0.83	60.40	4103	1
Apr 1	do	211	4951	0.88	60.49	4331	1
9	do	211	4951	0.88	60.54	4374	1
16	do	211	4993	0.92	60.69	4587	1
17	do	211	5014	0.98	60.76	4845	1
May 21	do	211	4910	3.58	60.31	17588	107
June 26	do	204	4856	3.27	60.08	15903	107
July 2	Emery	206	4900	3.45	60.30	16919	107
11	do	211	5013	1.84	60.76	9250	50
Aug. 1	do	204	4979	2.82	60.68	14034	70
6	do	205	4919	2.73	60.58	13409	70
8	do	205	4979	2.71	60.68	13510	70
26	Allen	205	4898	2.45	60.27	11991	70
26	do	205	4898	2.78	60.27	13638	70
27	do	205	4939	2.72	60.46	13424	70
27	do	205	4939	2.72	60.49	13411	70
28	do	205	4898	2.68	60.27	13158	70
28	do	205	4898	2.73	60.24	13347	70
29	do	205	4898	2.64	60.26	12941	70
29	do	205	4898	2.77	60.26	13558	70
30	do	205	4918	2.68	60.36	13173	70
30	do	205	4918	2.70	60.37	13765	70
Sept. 1	do	205	4918	2.68	60.39	13153	70
1	do	205	4918	2.71	60.34	13333	70
3	do	205	4878	2.57	60.18	12531	70
3	do	205	4878	2.60	60.19	12687	70
5	do	205	4878	2.61	60.23	12734	70
5	do	205	4878	2.61	60.23	12707	70
9	do	205	4939	2.68	60.49	13213	70
9	do	205	4939	2.67	60.52	13182	70
20	Emery	205	4737	2.46	59.46	11677	70
21	do	205	4737	2.49	59.54	11825	70
22	do	205	4818	2.32	59.90	11167	49
23	do	205	4842	1.76	60.05	8526	29
23	do	205	4857	1.72	60.03	8342	29
24	do	205	4818	1.49	59.90	7200	23
25	do	205	4838	1.57	59.96	7615	23
25	do	205	5033	1.55	59.96	7780	23
26	do	205	4860	1.54	60.03	7503	23
26	do	205	4839	1.56	59.94	7566	23
27	do	205	4859	1.30	60.12	6327	13
27	do	205	4875	1.19	60.19	5812	13

TABLE 54—Continued

DISCHARGE MEASUREMENTS—WESTERN OUTLET—LAKE OF THE WOODS ABOVE NORMAN DAM

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

Date	Hydrographer	Width Feet	Area Sq. Ft.	Mean Velocity Ft. per Sec.	Water Level Sea-level Datum	Discharge c. f. s.	Logs out of Dam
1913							
Sept. 28	Emery	205	4875	1.20	1060.14	5826	13
28	do	205	4859	1.20	60.07	5834	13
29	do	205	4821	1.21	59.91	5915	4
29	do	205	4821	1.19	59.93	5743	4
29	do	205	4860	1.18	60.06	5758	0
29	do	205	4860	1.11	60.08	5384	0
Oct. 1	do	205	4838	1.15	59.99	5565	0
1	do	205	4838	1.13	59.97	5470	0
2	do	205	4860	1.12	60.04	5463	0
2	do	205	4860	1.17	60.07	5692	0
3	do	205	4860	1.16	60.06	5638	0
3	do	205	4838	1.20	59.98	5806	0
4	do	205	4821	1.14	59.89	5477	0
5	do	205	4740	1.17	59.53	5559	0
6	do	205	4838	1.19	60.02	5759	0
23	Budge	205	4897	1.19	60.26	5841	0
25	do	205	4852	1.14	60.10	5540	0
28	do	205	4775	1.10	59.75	5235	0
30	do	205	4877	1.13	60.16	5530	0
Nov. 1	do	205	4897	1.12	60.28	5515	0
4	do	205	4897	1.13	60.28	5540	0
6	do	205	4877	1.13	60.19	5503	0
10	do	205	4857	1.13	60.07	5492	0
12	do	205	4857	1.11	60.06	5388	0
14	do	205	4877	1.16	60.14	5651	0
17	do	205	4878	1.11	60.16	5438	0
19	do	205	4877	1.13	60.21	5515	0
21	do	205	4857	1.16	60.06	5612	0
24	do	205	4877	1.18	60.15	5725	0
26	O'Grady	205	4857	1.09	60.06	5303	0
27	do	205	4877	1.09	60.20	5335	0
28	do	205	4857	1.14	60.09	5527	0
29	do	205	4877	1.13	60.18	5522	0
Dec. 2	Budge	205	4877	1.08	60.14	5239	0
5	do	205	4857	1.13	60.11	5467	0
29	O'Grady	205	4946	1.08	60.11	5355	0
29	do	205	4946	1.11	60.11	5458	0
1914							
Jan. 6	Madden	205	4946	1.13	60.10	5554	0
13	O'Grady	205	4923	1.05	60.06	5154	0
19	Madden	205	4926	1.07	60.06	5272	0
28	O'Grady	205	4927	1.11	60.04	5458	0
28	do	205	4927	1.08	60.04	5297	0
Feb. 4	do	205	4945	1.10	60.14	5461	0
4	do	206	4945	1.09	60.14	5390	0
9	do	205	4946	1.10	60.14	5421	0
9	do	206	4946	1.09	60.14	5385	0
17	do	205	4946	1.13	60.11	5582	0
17	do	205	4945	1.07	60.11	5280	0
24	do	205	4926	1.40	60.06	6860	35
24	do	205	4926	1.45	60.06	7172	35
26	do	205	4926	1.70	60.03	8350	35
26	do	205	4926	1.67	60.03	8207	35
Mar. 3	do	205	4904	1.68	59.95	8273	.....
3	do	205	4904	1.62	59.95	7962	.....
5	Moore	206	4906	1.60	59.96	7824	.....
20	O'Grady	205	4885	1.62	59.87	7930	.....
20	do	205	4885	1.66	59.87	8097	.....
24	do	205	4885	1.59	59.87	7774	.....
27	Moore	205	4884	1.63	59.85	7954	.....
27	do	205	4884	1.56	59.85	7610	.....
31	do	205	4886	1.57	59.86	7652	.....
31	do	205	4885	1.60	59.86	7837	.....

* TABLE 54—Continued

DISCHARGE MEASUREMENTS—WESTERN OUTLET—LAKE OF THE WOODS ABOVE NORMAN DAM

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

Date	Hydrographer	Width Feet	Area Sq. Ft.	Mean Velocity Ft. per Sec.	Water Level Sea-level Datum	Discharge c. f. s.	Logs out of Dam
1914							
Apr. 1	O'Grady	206	4885	1.61	1059.86	7893	
2	do	205	4885	1.63	59.86	7945	
9	Moore	205	4885	1.63	59.88	7980	
9	do	205	4885	1.59	59.88	7762	
15	O'Grady	205	4885	1.66	59.84	8111	
15	do	205	4885	1.52	59.84	7407	
17	Moore	205	4885	1.54	59.82	7527	
17	do	205	4885	1.42	59.82	6949	
22	O'Grady	206	4905	1.57	59.98	7678	
22	do	205	4905	1.64	59.98	8074	
25	Moore	205	4926	1.71	60.05	8437	
25	do	205	4926	1.69	60.05	8304	
27	do	205	4926	1.65	60.03	8119	
27	do	205	4926	1.68	60.03	8282	
29	O'Grady	205	4946	1.68	60.10	8321	
29	do	206	4946	1.73	60.10	8573	
May 1	do	205	4946	1.67	60.15	8272	
1	do	205	4946	1.75	60.15	8618	
9	Moore	205	5007	1.78	60.44	8929	
9	O'Grady	205	5007	1.75	60.42	8751	
15	Moore	205	4987	1.76	60.37	8775	
15	do	205	5028	1.76	60.52	8873	
15	do	205	5028	1.78	60.52	8936	
19	do	205	5028	1.63	60.57	9208	
23	do	205	5048	2.39	60.61	12112	54
23	do	205	5048	2.37	60.63	11963	
27	Galloway	205	5048	2.60	60.66	13113	72
27	do	206	5048	2.68	60.66	13526	
June 5	Moore	205	5088	2.99	60.78	15217	
5	do	205	5088	2.94	60.72	14991	
12	do	205	5129	3.07	61.00	15749	
12	do	205	5129	3.03	60.96	15545	
19	do	205	5109	3.33	60.96	17045	79
26	do	205	5088	3.62	60.68	18447	89
26	do	205	5088	3.58	60.67	18236	
30	do	205	5068	3.64	60.70	18436	
30	do	205	5068	3.67	60.70	18602	
July 10	Galloway	205	5068	3.58	60.60	18155	
10	do	205	5068	3.60	60.60	18287	
24	O'Grady	212	5081	3.35	60.69	16952	
27	Galloway	212	5041	3.51	60.54	17686	
27	do	212	5041	3.49	60.51	17604	
Aug. 8	O'Grady	205	4997	3.33	60.38	16396	
8	do	205	4997	3.30	60.38	16507	
15	do	205	4946	3.39	60.38	16720	
15	do	205	4946	3.39	60.11	16731	
21	do	205	4926	3.33	60.05	16399	
21	do	205	4926	3.27	60.05	16110	
Sept. 12	do	205	4997	2.24	10.38	11151	44
22	do	205	4946	2.12	60.11	10468	
29	do	201	4966	2.14	60.22	10622	
Oct. 3	Galloway	205	4967	2.23	60.36	11125	
3	do	205	4967	2.19	60.36	10905	
Nov. 9	O'Grady	212	5112	1.51	60.88	7713	10
11	do	212	5050	1.46	60.60	7395	
27	do	212	5080	1.42	60.74	7203	
Dec. 12	do	212	5091	1.48	60.78	7517	
29	Galloway	212	5104	1.45	60.76	7375	
29	do	212	5104	1.44	60.76	7339	

* For 1915 records see page 323.

* TABLE 55

DISCHARGE MEASUREMENTS MILL "A"—LAKE OF THE WOODS MILLING CO.

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

Head Race—Mill "A"

Date	Discharge c. f. s.	Date	Discharge c. f. s.	Date	Discharge c. f. s.	Date	Discharge c. f. s.
1905		1913		1913		1913	
Oct. 16	899	Mar. 28	747	Aug. 7	724	Sept. 4	789
						4	784
1912		Apr. 9	241	Sept. 2	792	4	784
Dec. 23	820	10	242	2	780	4	785
		10	219	2	757	6	234
1913		12	206	2	791	6	232
Feb. 14	769	12	226	2	763	6	236
20	760			2	778		
		May 21	885	2	767	Dec. 3	713
Mar. 11	769			4	774	4	754
12	693	June 26	873	4	743		
15	749			4	774		
21	765	July 15	774	4	811		

Head Race—Flume No. 1—Hydro-Electric Power House

1913		1914		1914		1914	
Dec. 10	248	Feb. 6	207	Apr. 3	102	June 9	228
10	234	6	200	3	110	9	230
23	273	6	204	3	100		
23	277	7	231	3	102	July 14	259
26	235	7	232	7	112	14	246
26	229	7	222	7	96	20	97
27	248	7	219	7	114	20	112
27	231	7	220	7	101	20	118
31	295	7	192	7	248	20	118
31	302	7	210	7	242	20	126
		7	199	8	119	20	263
1914		7	221	8	116	20	252
Jan. 2	164	13	154	8	115	21	115
2	161	13	169	8	123	21	121
5	252	13	186	9	107	21	119
5	278	13	178	9	109	21	122
9	277	13	176	9	109	21	119
9	290	13	173	9	107	22	116
23	220	13	162	10	106	22	115
23	241	13	188	10	105	29	121
24	202	13	184	10	226	29	117
24	178	14	179	10	241	29	115
24	182	14	173	11	95		
24	211	14	179	11	101	Aug. 14	281
30	292	14	181	11	99	14	273
30	316	14	158	11	102		
30	260	14	166	11	99	Sept. 18	225
30	270	20	122	11	103	18	225
30	258	20	108	11	99	30	236
30	262	20	105	15	107		
30	264	20	109	15	102		
30	244	21	117	15	104		
		21	119	15	108		
Feb. 6	153	21	104	16	88		
6	158	21	119				

Head Race—Flume No. 2—Mill Drive

1913		1914		1914		1914	
Dec. 10	653	Jan. 8	601	Apr. 7	687	July 14	598
10	654	8	601	7	691		
18	639	26	578	7	672	Aug. 14	680
18	638					14	707
23	655	Feb. 6	584	June 9	735	14	708
23	680	6	627	9	722		
26	628	19	657	11	726	Sept 18	658
26	628	19	659	11	712	18	689
27	625	21	641	15	727	30	635
27	622	21	655	15	745		
		21	675	20	694		
1914				20	711		
Jan. 2	622	Apr. 4	592				
5	620	7	691	July 14	622		

* For 1915 records see page 325.

* TABLE 56

DISCHARGE MEASUREMENTS—MILL "C" LAKE OF THE WOODS MILLING CO.

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

HEAD RACE

Date	Discharge c. f. s.	Date	Discharge c. f. s.	Date	Discharge c. f. s.	Date	Discharge c. f. s.
1912		1913		1914		1914	
July 17	888	Apr. 10	704	Jan. 9	667	June 4	688
30	967			24	650	9	674
		June 25	710	24	721	9	697
Aug. 14	969			23	689	11	696
28	1015	July 2	730	26	679	11	695
						15	710
Sept. 26	938	Aug. 7	696	Feb. 3	716	15	745
				3	675	24	707
Oct. 4	946	Sept. 6	739	3	688	24	706
11	1069	6	722	14	861	24	707
12	1035	6	719	14	868	24	711
16	993						
18	1112	Dec. 3	593	Mar. 4	630	July 14	709
		4	646	4	625	14	689
Nov. 26	766	9	670	5	608	17	771
26	791	11	708	5	618		
16	931	11	677			Aug. 14	760
		22	667	Apr. 20	653	14	775
1913		22	675	20	671	19	771
Feb. 7	715	27	744	21	658	19	732
14	706	27	749	21	671		
20	138	31	694	21	661	Sept. 17	766
		31	732	28	645	17	762
Mar. 11	693			28	655	30	692
12	698	1914					
15	666	Jan. 3	694	May 1	623	Nov. 4	662
21	672	3	702	22	629	4	644
28	174	8	647	22	687		
		8	648				
Apr. 8	703	9	679	June 4	685		

TAIL RACE

1914		1914		1914		1914	
Feb. 22	258	Feb. 22	297	Mar. 1	104	Mar. 1	397
22	260			1	141	1	396
22	308	Mar. 1	108	1	139		

* TABLE 57

DISCHARGE MEASUREMENTS—OLD KEEWATIN LUMBER AND MANUFACTURING COMPANY'S HEADRACE—KEEWATIN, ONTARIO

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

Date	Lake Level	Discharge c. f. s.	Date	Lake Level	Discharge c. f. s.
1913			1914		
Dec. 11	1060.10	104	July 11	1061.07	243
11	60.10	117			
23	60.06	109	Aug. 7	60.74	233
			7	60.74	231
1914					
Feb. 19	60.08	107	Sept. 17	60.41	186
			17	60.41	186
Mar. 25	59.87	91	30	60.46	207
25	59.87	94			
			Nov. 4	60.48	185
Apr. 10	59.84	93	4	60.48	187
10	59.84	96			
			Dec. 8	60.69	192
July 11	61.07	249	8	60.69	181

* For 1915 records see page 325.

* TABLE 58

DISCHARGE MEASUREMENTS—WINNIPEG RIVER AT WHITEDOG RAPIDS

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

SOUTH CHANNEL

Date	Hydrographer	Width Feet	Area Sq. Ft.	Mean Velocity Ft. per Sec.	Water Level (1) Sea Level Datum	Discharge c. f. s.
1914						
May 18	O'Grady	330	6665	1.74	1029.69	11589
July 6	Moore	350	7469	2.50	1032.39	18704
6	do	350	7469	2.27	1032.39	16991
Aug. 26	O'Grady	358	7387	2.31	1032.02	17041
27	do	358	7332	2.32	1031.93	17032
28	do	348	7322	2.29	1031.84	16769
29	do	357	7285	2.33	1031.75	16917
30	do	357	7211	2.18	1031.54	15687
31	do	355	7158	2.15	1031.38	15420
Sept. 1	do	355	7088	2.08	1031.19	14766
2	do	355	7042	2.01	1031.06	14137
3	do	344	6982	2.02	1030.89	14134
Oct. 13	do	339	6818	1.95	1030.59	13287
14	do	339	6810	1.90	1030.56	13046
15	do	339	6778	1.89	1030.48	12827
16	do	339	6745	1.85	1030.36	12502
17	do	332	6681	1.85	1030.16	12325
18	do	332	6644	1.79	1030.04	11887
19	do	330	6558	1.78	1029.82	11649
20	do	330	6540	1.69	1029.73	11061
21	do	330	6477	1.66	1029.58	10775
23	do	329	6443	1.64	1029.44	10578
24	do	329	6443	1.62	1029.44	10413
26	do	328	6362	1.61	1029.22	10256
27	do	328	6346	1.58	1029.17	10052
28	do	328	6329	1.51	1029.11	9544
29	do	328	6313	1.52	1029.08	9585

NORTH CHANNEL

Date	Hydrographer	Width Feet	Area Sq. Ft.	Mean Velocity Ft. per Sec.	Water Level (2) Sea Level Datum	Discharge c. f. s.
1914						
May 23	O'Grady	41	234	2.15	.....	504
23	do	41	234	2.12	.....	495
July 7	Moore	40	293	3.51	1036.93	1028
7	do	40	293	3.47	1036.93	1018
Aug. 26	Galloway	40	295	3.16	1036.40	929
27	do	40	292	3.00	1036.37	880
27	do	40	292	3.04	1036.37	889
28	O'Grady	40	289	2.84	1036.23	819
28	do	40	289	2.81	1036.23	812
29	do	40	285	2.94	1036.13	836
30	do	40	278	2.85	1035.99	794
Sept. 1	do	40	269	2.72	1035.76	733
1	do	40	269	2.84	1035.76	761
2	do	40	262	2.65	1035.62	695
Oct. 12	do	40	252	2.35	1035.33	594
14	do	41	259	2.44	1035.26	631
15	do	41	255	2.37	1035.18	602
15	do	41	255	2.39	1035.18	609
16	do	41	253	2.40	1035.11	607
16	do	41	253	2.40	1035.11	607
17	do	41	246	2.22	1034.99	546
17	do	41	247	2.22	1034.99	552
18	do	41	247	2.12	1034.94	524
18	do	41	247	2.15	1034.94	530
19	do	41	239	2.18	1034.74	521
19	do	41	239	2.18	1034.74	524
20	do	41	235	2.06	1034.65	481
20	do	41	235	2.07	1034.65	486
21	do	41	233	1.99	1034.61	462
21	do	41	233	1.99	1034.61	464
22	Galloway	41	231	1.97	1034.58	454
22	do	41	231	1.98	1034.58	456
23	do	41	228	1.92	1034.49	439
23	O'Grady	41	228	1.88	1034.49	428
25	do	41	223	1.90	1034.38	424
25	do	41	223	1.90	1034.38	423
26	do	41	221	1.86	1034.31	410
26	do	41	221	1.85	1034.31	408
27	do	41	219	1.71	1034.27	373
28	do	38	218	1.70	1034.25	370
28	do	38	218	1.70	1034.25	370

* For 1915 records see page 326. (1) Water level below first rapids. (2) Water level above Whitedog Rapids

TABLE 59

DISCHARGE MEASUREMENTS MADE AT OUTLETS OF LAKE OF THE WOOD PRIOR TO 1912

Date	Hydrographer	Elevation of Water Surface Sea-level Datum	Discharge c. f. s.	Location of Measurement
Nov. 11, 1892	James C. Kennedy	(1) 1043.3	*22560	Western outlet
May 26, 1893	do	(1) 1041.4	*15935	Do.
July 29, 1903	A. Pringle	(2) 1060.57	4122	Eastern outlet
Oct. 14, 1905	Ont. Hyd.-El. Power Com. (Acres)	(2) 1061.52	5321	Do.
Oct. 16, 1905	do		899	Mill "A" flumes
Do.	do		400	Keewatin Lumber & Mfg. Co. flumes
Oct. 18, 1905	do	(3) 1043.80	21794	Western outlet. Three-fourths mile below Norman Dam
Apr. 8, 1906	do	(2) 1060.70	4490	Eastern outlet

* The metered discharge is here reduced by 5% on account of roughness of bed at meter section in accordance with Mr. Kennedy's recommendation. (Engrs.)

(1) Refers to Tail Water Level at Norman. The value for Nov. 11 taken the same as Nov. 10, there being no record for Nov. 11. (Engrs.)
(2) Refers to Lake Level taken from Mean Lake Level line on stated date. (Engrs.)
(3) Refers to Tail Water Level at Keewatin taken from Mean Tail Water line for 1905. (Engrs.)

TABLE 60

MISCELLANEOUS DISCHARGE MEASUREMENTS—WINNIPEG RIVER

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

Date	Hydrographer	Width Feet	Area Sq. Ft.	Mean Velocity Ft. per Sec.	Water Level Sea-level Datum	Discharge c. f. s.	Location of Measurement
1914							
Oct. 9	O'Grady	96	424	1.26	1037.1	534	Throat Rapids (1)
10	do	254	6912	1.88	1035.56	12972	The Dalles Rapids (2)
Nov. 6	do	61	386	3.86	1036.52	1491	Section 32, Key Plan of Outlets
7	do	133	1660	3.12	1036.61	5161	Section 31, Key Plan of Outlets
6	do	145	1435	1.71	1036.31	2454	Section 34, Key Plan of Outlets
1915							
May 19	Pirie	146	2218	4.80	1040.58	10640	Section 31, Key Plan of Outlets
19	do	146	2218	4.73	1040.66	10553	Section 31, Key Plan of Outlets
20	do	147	2307	5.12	1041.13	11810	Section 31, Key Plan of Outlets
19	Madden	68	649	4.99	1040.73	3227	Section 32, Key Plan of Outlets
19	do	68	649	4.68	1040.73	3033	Section 32, Key Plan of Outlets
20	Pirie	68	670	5.38	1041.09	3606	Section 32, Key Plan of Outlets
19	Madden	145	1954	3.55	1040.03	6945	Section 34, Key Plan of Outlets
20	do	151	2121	3.72	1040.63	7898	Section 34, Key Plan of Outlets
18	McLennan	219	1690	0.84	1039.76	1416	Section 36, Key Plan of Outlets
19	do	222	1814	1.22	1040.34	2205	Section 36, Key Plan of Outlets
20	Moore	228	1914	1.27	1040.81	2438	Section 36, Key Plan of Outlets
22	O'Grady	252	7216	2.65	1036.91	19201	The Dalles Rapids (2)
23	do	111	628	3.74	1039.07	2350	Throat Rapids (1)

(1) Water Level at Meter Section at head of Throat Rapids. (Engrs.)
(2) Water Level at Meter Section at foot of Dalles Rapids. (Engrs.)

TABLE 61

DISCHARGE MEASUREMENTS—RAINY RIVER—INTERNATIONAL FALLS AND FORT FRANCES

RECORDS OF DEPARTMENTS OF BOTH GOVERNMENTS, ETC., AS INDICATED

REFERRED TO DEPT. OF PUBLIC WORKS (CANADA) DATUM

Date	Hydrographer	Width Feet	Area Sq. Ft.	Mean Velocity Ft. per Sec.	Elevation of Water Surface U.S.Dock		Discharge c. f. s.	Notes
					U.S.G.S. Gauge Ht.	D. P. W. Datum		
1900								
Sept. 5	J. T. & R. B. Fanning	.....	.....	.....	.....	463.2 *486.85	3431	(1)
1904								
June 14	Koochiching Power Co.	.....	.....	.....	.....	*490.15	10765	(2)
1905								
Oct. 25	Acres-Ont. Hyd. Com.	577	9034	1.57	.....	*491.75	14145	(3)
1906								
Apr. 1	.....do.....	493	6704	1.01	.....	*488.5	6805	(3)
1908								
Sept. 21	Ash-Minn. & Ont. Power Co.	.....	.....	.....	.....	†466.2 *490.6	12170	(4)
Oct. 10	.....do.....	.....	.....	.....	.....	†465.9 *490.1	11270	(5)
1909								
Sept. 29	Gray-U. S. Geol. Survey	520	7310	1.17	.....	†464.74	8560	(3)
Nov. 27	Adams-U. S. Geol. Survey	466	6390	0.81	.....	†462.69	5190	(3)
1910								
Apr. 6	Gray-U. S. Geol. Survey	564	8300	1.37	.....	†466.49	11400	(3)
June 23	Adams-U. S. Geol. Survey	523	7410	1.43	.....	†465.51	10600	(3)
Sept. 27	——Ont. Hyd. Com.	.....	6134	0.85	.....	462.4	5229	(6)
1911								
May 20	Johnson-Dept. Public Works, Canada	754	4192	1.40	.....	462.90	5874	(7)
June 7	Follansbee-U. S. Geol. Survey	486	7033	0.96	2.68	463.44	6720	.....
July 14	Soulé-U. S. Geol. Survey	429	3250	1.23	0.70	461.46	4010	(8)
Aug. 12	Johnson-Dept. Public Works, Canada	762	4520	1.44	2.73	463.49	6510	.....
28	.....do.....	752	4177	1.60	2.31	463.07	6680	.....
Sept. 19	Anderson-Dept. Public Works, Canada	.....	4870	1.22	2.02	462.78	5910	.....
Nov. 8	.....do.....	.....	3462	1.50	1.31	462.07	5210	.....
Dec. 5	.....do.....	.....	4810	1.23	3.14	463.90	5893	.....
1912								
Jan. 20	Soulé-U. S. Geol. Survey	733	5400	1.13	3.99	464.75	6090	(9)
Feb. 16	Anderson-Dept. Public Works, Canada	772	4920	1.15	3.18	463.44	5683	.....
Mar. 13	Stewart-Dept. Public Works, Canada	773	4503	1.12	2.72	463.48	5035	.....
May 7	.....do.....	786	5151	1.35	3.38	464.14	6981	(10)
June 1	.....do.....	790	4578	1.46	2.62	463.38	6680	.....
13	Soulé-U. S. Geol. Survey	780	4490	1.31	2.26	463.05	5880	.....
July 23	Stewart-Dept. Public Works, Canada	765	5312	1.67	3.77	464.56	8875	.....
Aug. 5	Scovil-Man. Hyd. Survey	770	5764	1.57	4.16	464.95	9077	.....
7	Hoyt & Soulé—U. S. Geol. Survey	780	5980	1.67	4.46	465.25	9960	.....
Sept. 9	Piric-Man. Hyd. Survey	762	5036	1.53	3.33	464.12	7705	.....
19	Stewart-Dept. Public Works, Canada	757	4448	1.45	2.65	463.44	6439	.....
Nov. 6	Nelson-Man. Hyd. Survey	761	4537	1.41	2.89	463.68	6420	.....

* Water level above Koochiching Falls.
† Water level determined from M. & O. Gauge by allowance for fall.

* TABLE 61—Continued

DISCHARGE MEASUREMENTS—RAINY RIVER—INTERNATIONAL FALLS AND FORT FRANCES

Date	Hydrographer	Width Feet	Area Sq. Ft.	Mean Velocity Ft. per Sec.	Elevation of Water Surface at U.S.Dock		Discharge c. f. s.	Notes
					U.S.G.S. Gauge Ht.	D. P. W. Datum		
1913								
Jan. 12	Pirie–Man. Hyd. Survey	760	5058	0.96	3.48	464.27	4850	
Feb. 20	Brown–Dept. Public Works, Canada	770	5849	1.19	4.77	465.56	6937	
Mar. 8	do	771	5976	1.12	4.87	465.66	6672	
20	do	767	5706	1.18	4.59	465.38	6734	
Apr 2	Brown & Jamieson–Dept. Public Works, Canada	771	5045	1.19	3.21	464.00	6016	
May 22	Jamieson–Dept. Public Works, Canada	773	5900	1.20	4.55	465.34	7079	
June 13	Brown–Dept. Public Works, Canada	784			4.14	464.93	8185	
July 23	Brown & Jamieson–Dept. Public Works, Canada	809	8033	1.60	7.33	468.12	12818	(11)
25	Peterson – Int. Joint Comm	635	9674	1.40	7.17	467.96	13600	(12)
Aug. 8	do	777	6340	1.58	4.78	465.57	10040	(13)
9	do	781	6480	1.56	5.00	465.79	10090	(14)
28	Brown & Jamieson–Dept. Public Works, Canada	772	5024	1.56	3.02	463.81	7854	
Sept. 23	do	774	4775	1.54	2.78	463.57	7343	
Oct. 10	Peterson – Int. Joint Comm	766	5316	1.18	3.60	464.39	6260	
12	do	766	5479	1.03	3.78	464.57	5640	
18	Brown & Jamieson–Dept. Public Works, Canada	778	5472	1.44	3.57	464.36	7910	
Nov. 27	Brown–Dept. Public Works, Canada	767	5134	1.41	3.28	464.07	7234	
Dec. 12	do	774	5913	1.15	4.49	465.28	6818	
1914								
Feb. 25	Jamieson–Dept. Public Works, Canada	772	6344	1.11	4.86	465.65	7041	
May 15	Jamieson & Smallian–Dept. Public Works, Canada	772	5910	1.20		465.40	7090	
June 15	do	774	6058	1.46		465.56	8845	
23	do	773	5789	1.54	4.10	464.89	8940	
July 8	Smallian–Dept. Public Works, Canada	777	6022	1.55	4.80	465.59	9324	
Aug. 6	do	777	6133	1.72	4.80	465.59	10530	
Sept. 4	do	778	6156	1.75	4.30	465.69	10805	
Oct. 7	do	777	6068	1.72	4.81	465.60	10430	

* For 1915 records see page 326.

NOTES

(1) Float measurement. Approximate water level at U. S. dock is 463.2.
(2) Surface float measurement. Corrected by 0.8 for mean velocity.
(3) Meter measurement one-half mile below Koochiching Falls at Island section.
(4) Float measurement. Elevation of Rainy Lake on Sept. 21st, 1908, was 492.3.
(5) Meter measurement. Elevation of Rainy Lake on Oct. 10th, 1908, was 491. 6.
(6) Float measurement one-half mile below Koochiching Falls at Island section.
(7) Meter measurement one-fourth mile below Koochiching Falls at present section. All measurements following are at this section except where otherwise noted.
(8) Measurement made from railway bridge at Ranier, Minn. There was no appreciable change in M. & O. head gauge during measurement.
(9) Entirely open condition at meter section. Section about 300 feet below gauge.
(10) Back water due to influence of Big Fork and Little Fork Rivers.
(11) 50 feet below gauge.
(12) 1200 feet below gauge.
(13) Stage rose 0.2 foot during measurement.
(14) Stage fell 0.2 foot during measurement.

TABLE 62

DISCHARGE MEASUREMENTS—RAINY RIVER—EMO, ONTARIO

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

Date	Hydrographer	Width Feet	Area Sq. Ft.	Mean Velocity Ft. per Sec.	Water Level D. P. W. Datum	Discharge c. f. s.
1912						
Oct. 3	Pirie	731	5962	1.75	457.92	10419
Nov. 7	Nelson	717	4603	1.41	456.57	6482
1913						
Jan. 14	Pirie	722	5009	1.29	457.97	6455
Mar. 21	....do	690	4808	1.43	458.53	6876
1914						
July 17*	Jamieson & Smallian	806	8080	2.18	461.00	18252

* Record of the Department of Public Works, Canada.

TABLE 63

DISCHARGE MEASUREMENTS—RAINY RIVER—BAUDETTE, MINN.

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

Date	Hydrographer	Width Feet	Area Sq. Ft.	Mean Velocity Ft. per Sec.	Water Level D. P. W. Datum	Discharge c. f. s.
1912						
Aug. 3	Richardson	1010	16003	0.68	446.95	10824
21	Worden	1013	16378	0.51	447.10	8287
Sept. 3	Pirie	1000	15925	0.34	446.92	5414

TABLE 64

DISCHARGE MEASUREMENTS—VERMILION RIVER—OUTLET LAKE VERMILION, MINN.

RECORDS OF UNITED STATES GEOLOGICAL SURVEY

Date	Hydrographer	Width Feet	Area Sq. Ft.	Mean Velocity Ft. per Sec.	Gauge Height	Discharge c. f. s.	Notes
1911							
May 31	Emerson	65	116	4.49	1.94	518	(1)
June 30	....do	65	113	4.30	1.88	486	.....
July 30	Soulé	26	76	3.44	1.32	262	.....
Oct. 8	....do	26	65	2.66	0.93	173	.....
1912							
Jan. 16	....do	23	69	2.03	0.69	140	(2)
Mar. 7	....do	23	51	1.92	0.52	98	(2)
7	Hoyt	23	57	1.81	0.52	103	(2)
Oct. 16	Soulé	23	56	1.88	0.58	105	.....
1913							
July 2	....do	47	154	5.90	2.63	908	.....
2	....do	47	153	5.95	2.62	912	.....
Oct. 7	Peterson	24	53	1.39	0.32	73	.....
7	....do	24	52	1.40	0.32	73	.....
1914							
May 20	Soulé	128	754	1.42	2.91	1070	(3)
21	....do	144	959	1.03	2.85	991	(4)

(1) With soundings corrected by measurement of June 30.
(2) Open water conditions, regular section.
(3) Measurement made about 4000 feet below gauge. Control clear.
(4) Measurement made about 6000 feet below gauge. Control clear.

TABLE 65

DISCHARGE MEASUREMENTS—LITTLE FORK RIVER—LITTLE FORK, MINN.

RECORDS OF UNITED STATES GEOLOGICAL SURVEY

Date	Hydrographer	Width Feet	Area Sq. Ft.	Mean Velocity Ft. per Sec.	Gauge Height	Discharge c. f. s.	Notes
1909*							
July 1	Gray	122	201	1.18	5.52	237	.....
24	Follansbee	122	184	1.03	5.41	190	.....
Aug. 26	Gray	133	452	2.02	7.66	910	.....
Sept. 30	.....do	132	445	1.85	7.50	824	.....
1910							
June 21	Adams	136	214	0.84	5.30	180	.....
July 22	Follansbee	54	83	1.06	4.82	87	.....
1911							
Apr. 4	Adams	147	910	1.54	10.80	1400	(1)
18	Follansbee	153	1370	2.72	15.46	3730	(2)
19	.....do	153	1330	2.69	15.00	3580	(2)
June 9	Soulé	152	1095	2.18	11.06	2388	.....
July 15	.....do	137	174	0.82	5.20	144	.....
Dec. 12	.....do	113	146	1.07	6.00	156	(3)
1912							
Jan. 21	Soulé	66	74	0.87	5.52	64	(4)
Feb. 26	.....do	68	65	1.13	5.76	73	(5)
Mar. 30	.....do	65	53	1.25	5.94	67	(6)
May 20	.....do	152	1260	1.82	12.34	2290	(7)
20	.....do	152	1240	1.80	12.23	2230	(7)
June 14	.....do	141	429	1.42	6.83	610	.....
14	.....do	141	437	1.38	6.83	605	.....
Aug. 6	Hoyt	125	190	0.69	5.28	131	(8)
Dec. 19	Soulé	98	130	0.87	5.82	113	(9)
1913							
Jan. 15	Soulé	96	104	0.76	5.58	79	(10)
Feb. 18	.....do	91	87	0.61	5.50	53	(10)
May 1	.....do	154	1420	2.51	13.32	3560	(11)
July 30	Peterson	142	397	1.51	6.88	598	.....
1914							
Jan. 26	Soulé	94	138	0.83	6.28	115	(12)
Feb. 25	.....do	76	112	0.73	6.12	82	(12)
May 16	.....do	152	1080	2.22	11.25	2400	(13)
Aug. 14	Stewart	129	204	1.35	5.79	276	(14)
Dec. 15	Soulé	85	141	0.84	6.02	118	(15)
1915							
Jan. 19	Soulé	75	107	0.79	6.16	85	(15)
Mar. 27	.....do	84	111	1.01	6.65	112	.....
Sept. 13	Critchlow	85	106	1.50	5.66	159	.....
Nov. 12	Soulé	145	768	1.76	9.50	1350	(16)
Dec. 21	Williams	212	853	0.21	7.57	182	(17)

*Max. high-water mark 14.7 Aug. 14. Min. recorded stage 5.08 July 12.

(1) Measurement under ice cover.
(2) Backwater from log jam.
(3) Under complete ice cover, 0.71 foot, 9 inches.
(4) Complete ice cover, average thickness of ice 1.19 feet, average distance water surface to top of ice 0.28 foot. Section 300 feet above gauge.
(5) Complete ice cover; average thickness of ice 1.60 feet, average distance of water surface to top of ice 0.07 foot.
(6) Complete ice cover, average thickness of ice 1.78 feet, average distance of water surface to top of ice 0.00 foot.
(7) Log jam on railway bridge about 2 miles below gauge.
(8) Backwater from logs held in boom just below railway bridge.
(9) Complete ice cover—average thickness of ice at measuring section (156′ above gauge) 0.68 foot—average distance of water surface to top of ice 0.05 foot.
(10) Complete ice cover—measurement 160′ above gauge.
(11) Measurement from upstream side of bridge instead of downstream side. Logs running during measurement but not lodged anywhere.
(12) Measurement about 160′ above gauge. Complete ice cover at control and at gauge.
(13) Control apparently clear. There were a good many logs running while this measurement was being made. This measurement was made from the upstream side of the bridge instead of the downstream side, which is the regular section. This was necessary in order to watch the logs to avoid getting the meter snagged.
(14) Measurement from bridge, at gauge.
(15) Measurement made from ice about 100′ above gauge. Complete ice cover at measuring section and at control.
(16) Measurement from bridge at gauge. Control apparently clear.
(17) Measurement made about 3,000′ above gauge, about 200′ below the sawmill in Little Fork, and about 6′ below last piling downstream to which boom is attached. Complete ice cover at control and at measuring section. Measurement poor, velocities too low for good results.

TABLE 66

DISCHARGE MEASUREMENTS—BIG FORK RIVER—BIG FALLS, MINN.

RECORDS OF UNITED STATES GEOLOGICAL SURVEY

Date	Hydrographer	Width Feet	Area Sq. Ft.	Mean Velocity Ft. per Sec.	Gauge Height	Discharge c. f. s.	Notes
1909							
Aug. 27	Gray	266	1510	0.64	4.66	960	
Oct. 1	do	246	1210	0.44	4.01	535	
1910							
July 21	Follansbee				2.78	65	
1911							
June 10	Soulé	274	2090	0.84	7.07	1760	(1)
July 12	do	128	307	0.62	3.89	193	(2)
Dec. 13	do	127	176	0.37	2.65	65	(3)
1912							
Jan. 23	Soulé	117	108	0.25	2.33	27	(4)
Feb. 27	do	119	114	0.33	2.39	37	(5)
Apr. 1	do	14	14	1.90	2.24	27	(6)
1	do	30	22	1.28	2.24	29	(7)
May 21	do	143	590	1.61	5.06	951	
Aug. 8	do	122	159	0.61	3.13	97	(8)
Dec. 20	do	46	37	1.22	2.40	46	(9)
1913							
Jan. 16	Soulé					28	
1914							
Aug. 13	Stewart	115	341	1.31	3.65	448	
Sept. 14					4.29	461	(10)

(1) Measurement made at M & I railway bridge. Lower gauge 6.07.
(2) Measurement made at car and cable station. Lower gauge 2.99.
(3) Complete ice cover, measurement made at cable section, gauge reading of lower gauge only given, average thickness of ice 0.7 foot.
(4) Complete ice cover. Average thickness of ice 1.24 feet. Average distance water surface to top of ice 0.29 foot.
(5) Complete ice cover. Average thickness of ice 1.27 feet. Average distance water surface to top of ice 0.32 foot.
(6) Section about 40′ below down stream edge of highway bridge, measurement in open water—complete ice cover at gauge.
(7) Section about 25′ below down stream edge of highway bridge, measurement in open water—complete ice cover at gauge.
(8) A great many logs in channel causing considerable back water.
(9) Complete ice cover at gauge—entirely open at measuring section. Measurement 800 feet above gauge.
(10) Gauge at right end of railway bridge.

TABLE 67

DISCHARGE MEASUREMENTS—KAWISHIWI RIVER—NEAR WINTON, MINN.

RECORDS OF INTERNATIONAL JOINT COMMISSION, COÖPERATING WITH UNITED STATES GEOLOGICAL SURVEY

Date	Hydrographer	Width Feet	Area Sq. Ft.	Mean Velocity Ft. per Sec.	Gauge Height	Discharge c. f. s.	Notes
1912							
Oct. 13	Soulé	77	417	1.96	2.31	818	(1)
14	do	75	260	0.42	0.72	109	(2)
14	do	120	520	3.40	3.69	1770	(3)
15	do	150	674	4.27	4.98	2880	(4)
1913							
Apr. 29	do	102	515	3.30	3.63	1700	
30	do	72	229	0.35	0.62	81	
Sept. 12	Peterson	76	274	0.60	0.89	163	
13	do	77	404	2.00	2.32	810	
1914							
May 22	Soulé	150	609	3.48	4.21	2120	(5)
1915							
Sept. 23	do	77	291	0.64	1.23	186	(6)

(1) 1–12 foot gate in Garden Lake dam open.
(2) Gates closed, measurement represents leakage.
(3) 1–12 foot and 1–16 foot gate open.
(4) 1–12 foot, 1–16 foot, and 1–20 foot gate open.
(5) Gauge was checked with level and found to be correct.
(6) Measurement made from cable about 1,000′ above gauge. There were quite a large number of logs lodged on crest of dam which constitutes control of gauge; one large log in particular lay lengthwise of crest and obstructed the water almost entirely from that portion of the crest. It was estimated before making the measurement that the backwater from the logs amounted to about 0.3′; the measurement indicated 0.26′ of backwater.

TABLE 68

DISCHARGE MEASUREMENTS OF KETTLE RIVER ABOVE KETTLE FALLS

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

INTERNATIONAL CHANNEL

Date	Hydrographer	Width Feet.	Area Sq. Ft.	Mean Velocity Ft. per Sec.	Water Level D.P.W. Datum	Discharge c. f. s.
1912						
Aug. 8	Scovil	213	4351	0.77	500.67	3345
Sept. 6	Pirie	213	4353	0.68	500.05	2960
9	Richardson	213	4318	0.64	500.10	2775
30	Pirie	213	4341	0.59	499.65	2548
Nov. 2	Nelson	213	4193	0.49	498.99	2037
4	.....do	213	4156	0.48	498.98	1999
1913						
Jan. 10	Pirie	208	3981	0.33	498.13	1312
10	.....do	208	3981	0.33	498.13	1298
Mar. 17	.....do	210	3888	0.28	497.60	1105
May 31	.....do	223	5246	1.22	503.41	6375
July 3*	Jamieson	224	4997	1.33	503.58	6668
30*	.....do	221	4445	0.96	502.18	4535

CANADIAN CHANNEL

1912						
Aug. 8	Scovil	120	1273	1.13	500.69	1435
Sept. 6	Pirie	115	1207	0.90	500.04	1088
9	Richardson	118	1181	0.80	500.06	942
29	Pirie	115	1198	0.75	499.70	901
30	.....do	115	1191	0.70	499.64	834
Nov. 2	Nelson	108	1100	0.50	499.00	546
4	.....do	108	1184	0.52	498.99	561
1913						
Jan. 9	Pirie	102	975	0.34	498.13	328
9	.....do	102	975	0.33	498.13	324
Mar. 15	.....do	102	936	0.23	497.61	212
May 31	.....do	183	1719	2.38	503.39	4088
July 2*	Jamieson	192	1723	2.13	503.68	4015
29-30*	.....do	145	1466	1.55	502.23	2562

* Record of the Department of Public Works, Canada.

TABLE 69

WATER LEVELS, DISCHARGE AND FALL—RAINY RIVER AT KOOCHICHING FALLS

Date	Elevation of Water Surface			Fall in Feet	Discharge c. f. s.	Date	Elevation of Water Surface			Fall in Feet	Discharge c. f. s.
	Above Falls	Below Falls	U. S. Dock				Above Falls	Below Falls	U. S. Dock		
1907						1908					
June 24	490.50	466.20	466.00	24.30	11480	July 8	491.80	467.70	467.50	24.10	14680
25	490.60	466.30	466.10	24.30	11685	11	492.00	467.80	467.60	24.20	14900
29	491.10	466.50	466.30	24.60	12095	16	492.20	468.00	467.80	24.20	15340
July 5	491.40	467.20	467.00	24.20	13580	Aug. 6	492.40	468.30	468.10	24.10	16000
8	491.60	467.40	467.20	24.20	14020	18	492.30	468.20	468.00	24.10	15780
15	491.90	467.60	467.40	24.30	14460	21	492.20	468.00	467.80	24.20	15340
Aug 24	493.80	469.60	469.40	24.20	18910	Sept. 3	491.40	467.30	467.10	24.10	13800
26	493.90	469.75	469.55	24.15	19250	8	491.20	467.00	466.80	24.20	13150
28	494.00	469.75	469.55	24.25	19250	11	491.10	466.90	466.70	24.20	12935
30	494.10	469.90	469.70	24.20	19585	16	490.90	466.60	466.40	24.30	12300
						21	490.60	466.40	466.20	24.20	11890
Sept. 4	494.30	470.20	470.00	24.10	20260	26	490.50	466.30	466.10	24.20	11685
10	494.50	470.30	470.10	24.20	20485						
20	494.60	470.50	470.30	24.10	20940	Oct. 1	490.25	466.25	466.05	24.00	11580
30	494.70	470.70	470.50	24.00	21390	5	490.00	466.05	465.85	23.95	11180
						15	489.58	465.46	465.26	24.12	10000
Oct. 5	494.70	470.50	470 30	24.20	20940	19	489.54	465.29	465.09	24.25	9660
10	494.60	470.60	470.40	24.00	21165	26	489.15	465.08	464.88	24.07	9250
15	494.50	470.40	470.20	24.10	20710	30	488.90	464.92	464.72	23.98	8950
18	494.30	470.30	470.10	24.00	20485						
25	494.00	469.80	469.60	24.20	19360	Nov. 2	488.78	464.78	464.58	24.00	8694
31	493.90	469.80	469.60	24.10	19360	5	488.66	464.60	464.40	24.06	8370
						10	488.44	464.25	464.05	24.19	7755
Nov. 5	493.80	469.60	469.40	24.20	18910	16	488.22	464.02	463.82	24.20	7373
9	493.60	469.50	469.30	24.10	18685	20	488.08	463.92	463.72	24.16	7210
15	493.30	469.10	468.90	24.20	17785	28	487.80	463.65	463.45	24.15	6788
20	493.10	468.90	468.70	24.20	17335						
25	492.70	468.60	468.40	24.10	16670						

These records refer to the condition of no backwater at the lower gauge. Elevations of water surface above and below the falls are taken from the Records of the Minnesota & Ontario Power Co., Table 36.

Elevations at the United States dock, about one-quarter mile below the falls, were obtained by subtracting 0.2 foot from the elevations below the falls to compensate for average slope between these two points.

The fall in feet represents the difference between the water surface elevations above and below the falls.

The discharge is obtained from the "Rating Curve of Discharge of Rainy River," Plate 85 using water levels at the United States dock.

TABLE 70

DAILY RATE OF OUTFLOW—LAKE OF THE WOODS—ALL OUTLETS

Cubic Feet Per Second

Date	1892											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1										31340	27700	23355
2										30590	27500	23180
3										31135	27305	23005
4										31135	27305	22330
5										30930	27110	22830
6										30930	26415	22655
7										30725	26915	22480
8										30725	26720	22310
9										29770	26525	22140
10										30520	26525	22140
Av										30780	27002	22642
11										30315	26330	21470
12										30110	26140	21800
13										30110	25450	21635
14										29905	25760	21470
15										29905	25760	21470
16										28950	25570	21305
17										29500	25380	21140
18										29500	25190	20480
19										29300	25000	20820
20										29300	24500	20820
Av										29689	25508	21241
21										29100	24815	20660
22										28900	24630	20500
23										28150	24445	20340
24										28700	24260	20185
25										28500	24260	19685
26										28500	24075	20030
27										28300	23395	19875
28										28300	23715	19720
29										28100	23535	19570
30										27150	23535	19570
31										27900	.....	19420
Av										28327	24067	19960
Mon. Mean										29558	25525	21238

Date	1893											
1	18770	15980	14270	12625	12835	21140	24815	25380	23005	18370	15600	12625
2	19120	15850	14270	12125	12940	21305	24065	25380	22830	18975	15475	12625
3	18975	15725	14155	12625	13045	21470	24815	25380	21905	18830	15350	12020
4	18975	15725	14040	12625	13150	20885	25000	25380	22480	18685	15225	12520
5	18830	15100	13425	12625	13480	21800	25000	25190	22480	18685	14725	12415
6	18685	15475	13810	12625	13810	21970	25000	24440	22310	18545	15100	12415
7	18545	15475	13700	12625	13770	22140	25190	25190	22140	18405	14980	12315
8	17905	15350	13590	12730	14740	22310	25190	25000	22140	17515	14860	12315
9	18405	15225	13480	12230	15100	22480	24440	25000	21970	18125	14740	12215
10	18265	15225	13370	12730	15475	22655	25380	25000	21050	18125	14620	11615
Av	18648	15513	13811	12557	13835	21816	24890	25134	22236	18426	15068	12308
11	18125	15100	13150	12730	15850	22080	25380	24815	21800	17985	14500	12115
12	17985	14600	12545	12730	16240	22830	25380	24815	21635	17845	13885	12015
13	17845	14980	12940	12730	16500	23005	25380	23880	21470	17705	14270	12015
14	17845	14980	12940	12730	16260	23180	25380	24630	21305	17570	14155	11915
15	17205	14860	12835	12730	17165	23355	25380	24445	21140	16685	14040	11915
16	17570	14860	12730	12230	17435	23355	24820	24445	20980	17300	13925	11815
17	17435	14740	12730	12730	17570	23535	25570	24260	20230	17300	13810	11315
18	17300	14740	12625	12730	17985	22785	25570	24260	20820	17165	13700	11720
19	17300	14240	12125	12730	18265	23715	25570	24260	20660	17030	13090	11720
20	17165	14740	12625	12730	18545	23895	25570	23325	20500	16895	13480	11625
Av	17578	14784	12725	12680	17182	23174	25400	24314	21054	17348	13886	11817
21	17030	14620	12625	12730	17935	23895	25570	24075	20340	16760	13370	11625
22	16530	14620	12625	12730	18975	24075	25570	23895	20185	16010	13260	11530
23	16895	14620	12625	12230	19270	24075	24820	23895	20185	16630	13150	11530
24	16760	14500	12625	12730	19570	24260	25570	23715	19280	16500	13045	10935
25	16630	14500	12625	12730	19720	23510	25570	23715	19875	16370	13045	11340
26	16500	14000	12125	12730	19875	24260	25570	23535	19720	16240	12440	11245
27	16500	14500	12625	12730	20185	24445	25570	22785	19570	16110	12835	11245
28	16370	14385	12625	12730	19590	24445	25570	23355	19420	15980	12835	11150
29	15740	.....	12625	12730	20500	24630	25570	23355	19420	15230	12730	11060
30	16210	.....	12625	12230	20820	24630	24820	23180	19270	15850	12730	10970
31	16110	.....	12625	.....	20980	.....	25570	23005	.....	15725	.....	10470
Av	16482	14468	12579	12630	19765	24223	25434	23501	19727	16128	12944	11191
Mon. Mean	17534	14954	13024	12622	17019	23071	25247	24290	21005	17268	13966	11753

TABLE 70—Continued

DAILY RATE OF OUTFLOW—LAKE OF THE WOODS—ALL OUTLETS

Cubic Feet Per Second

Date	1894											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	10880	9920	8620	7180	11815	20030	25775	26720	23355	17705	16240	13590
2	10790	9920	8620	7680	12115	20185	26525	26525	22430	17570	16240	12980
3	10790	9835	8540	7605	12415	19590	26720	26525	23005	17435	16110	13370
4	10700	9335	8040	7605	12835	20500	26720	26330	22830	17300	15610	13260
5	10610	9750	8460	7605	13150	20660	26915	25390	22830	17300	16110	13150
6	10610	9750	8460	7605	12980	20820	26915	26140	22655	17300	15980	12940
7	10020	9665	8380	7605	13810	20980	26915	25950	22480	16550	15980	12835
8	10520	9665	8380	7105	14040	21140	26360	25950	22480	17300	15850	12730
9	10520	9580	8300	7680	14385	21470	27110	25760	21560	17300	15850	12125
10	10430	9580	8300	7680	14740	20885	27110	25760	22140	17300	15850	12520
Av.	10587	9700	8410	7535	13229	20626	26707	26105	22577	17306	15982	12950
11	10430	9000	7720	7680	14980	21970	27305	25570	21970	17300	15225	12415
12	10345	9420	8220	7680	15350	22310	27305	24820	21800	17300	15725	12315
13	10343	9340	8220	7755	15100	22655	27305	25380	21635	17300	15600	12215
14	9760	9310	8140	7755	15850	22830	27305	25190	21470	16550	15475	12115
15	10260	9260	8140	7330	16110	23180	26555	25190	21140	17165	15475	12015
16	10175	9180	8060	7905	16370	23535	27305	25000	20230	17165	15350	11415
17	10175	9180	8060	7980	16630	22965	27500	25000	20820	17165	15225	11915
18	10175	8600	7480	8060	16895	24075	27500	24815	20500	17030	14725	11815
19	10175	9100	7980	8220	17030	24260	27500	23880	20340	17030	15100	11720
20	10090	9020	7980	8380	16550	24630	27500	24630	20030	16895	14980	11720
Av.	10193	9144	8000	7875	16086	23241	27308	24948	20993	17090	15288	11966
21	9590	9020	7905	8540	17435	24630	27500	24445	19875	16145	14860	11625
22	10090	8940	7905	8280	17705	25000	26555	24260	19570	16760	14740	11625
23	10005	8940	7830	9100	17985	25190	27305	24260	18520	16760	14620	11030
24	10005	8860	7830	9420	18265	24630	27305	24075	18975	16760	14500	11530
25	10005	8360	7330	9665	18405	25570	27110	24075	18685	16630	13885	11435
26	10005	8780	7755	10005	18685	25760	27110	23145	18545	16630	14270	11435
27	10005	8780	7755	10430	18225	25950	27110	23895	18265	16500	14155	11340
28	9505	8700	7755	10700	19120	26140	26915	23715	18125	15750	14040	11340
29	9920	.....	7680	10560	19270	26140	26165	23535	17985	16500	13925	11340
30	9920	.....	7680	11435	19570	26330	26915	23355	16955	16370	13700	10840
31	9920	.....	7680	.....	19720	.....	26720	23355	.....	16370	.....	11245
Av.	9906	8798	7737	9813	18580	25534	26974	23829	18550	16470	14270	11344
Mon. Mean	10218	9244	8039	8408	16029	23134	26995	24924	20707	16940	15180	12062

Date	1895											
1	11245	10610	9260	8860	9920	11720	18125	20500	18970	17705	15475	12980
2	11245	10610	9260	8860	10090	11065	18265	20500	19570	17705	15350	13480
3	11245	10110	8680	8940	10260	11915	18405	20500	19570	17570	14850	13370
4	11245	10520	9180	8940	10430	12015	18405	19750	19570	17435	15225	13370
5	11245	10520	9180	8940	10110	12215	18545	20500	19420	17435	15225	13260
6	10745	10430	9100	8940	10790	12520	18685	20500	19420	16550	15100	13150
7	11245	10430	9100	8520	10970	12835	18080	20500	19420	17300	15100	13150
8	11245	10345	9100	9020	11060	13150	18975	20500	18520	17165	14980	12545
9	11245	10260	9100	9020	11150	12730	18975	20500	19270	17165	14980	13045
10	11245	9760	8520	9100	11245	13810	19120	20340	19120	17030	14360	12940
Av.	11195	10360	9048	8914	10603	12398	18558	20409	19285	17306	15065	13129
11	11245	10175	9020	9100	11340	14040	19120	19590	19120	17030	14860	12940
12	11150	10175	9020	9180	10840	14385	19270	20340	18975	16895	14740	12835
13	10650	10090	9020	9180	11340	14620	19420	20340	18975	16010	14740	12835
14	11150	10090	9020	8760	11435	14980	18820	20340	18975	16760	14620	12730
15	11150	10005	9020	9260	11435	15225	19570	20340	18080	16630	14500	12230
16	11150	10005	9020	9340	11435	14725	19720	20340	18830	16630	14500	12625
17	11150	9420	8520	9340	11435	15725	19720	20185	18685	16500	13885	12625
18	11060	9835	9020	9340	11435	16110	19875	19435	18685	16500	14385	12520
19	11060	9835	8940	9420	10685	16370	19875	20185	18685	16370	14270	12415
20	10560	9750	8940	9420	11435	16630	20030	20185	18545	15620	14270	12415
Av.	11033	9938	8954	9234	11281	15281	19542	20128	18756	16495	14477	12617
21	11060	9750	8940	8920	11435	16895	19280	20185	18545	16240	14155	12315
22	10970	9665	8940	9420	11530	17030	20185	20030	17655	16240	14040	11815
23	10970	9665	8940	9420	11530	16415	20185	20030	18405	16110	14040	12215
24	10970	9080	8440	9420	11530	17300	20340	20030	18265	15980	13425	12215
25	10880	9500	8940	9420	11530	17435	20340	19280	18265	15980	13925	12115
26	10880	9420	8940	9500	10780	17435	20340	19875	18125	15850	13810	12115
27	10380	9420	8940	9580	11530	17570	20340	19875	18125	15100	13810	12015
28	10790	9340	8940	9165	11625	17705	19750	19875	17985	15725	13700	12015
29	10790	.....	8860	9750	11625	17845	20500	19875	17095	15725	13590	11415
30	10700	.....	8860	9835	11625	17235	20500	19720	17845	15600	13590	11815
31	10700	.....	8360	.....	11720	.....	20500	19720	.....	15600	.....	11815
Av.	10826	9480	8827	9443	11496	17286	20205	19863	18031	15832	13809	11988
Mon. Mean	11012	9958	8939	9197	11139	14988	19460	20125	18691	16521	14450	12559

TABLE 70—Continued

DAILY RATE OF OUTFLOW—LAKE OF THE WOODS—ALL OUTLETS

Cubic Feet Per Second

Date	1896											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	11815	10260	8520	8300	14980	28700	37085	35795	32810	28900	22555	22140
2	11720	9760	8940	8380	15225	29100	37300	34745	32810	28700	23180	22140
3	11720	10175	8940	8460	15100	29500	37300	35795	32600	28500	23180	21970
4	11625	10175	8860	8540	15980	29905	37515	35795	32390	27250	23180	21970
5	11125	10090	8860	8200	16370	30520	36465	35580	32390	28100	23005	21970
6	11530	10090	8860	8780	16630	30930	37515	35580	31130	28100	23005	21170
7	11530	10005	8780	8940	17030	30385	37730	35580	31970	27900	23005	21800
8	11435	10005	8280	9100	17435	31550	37730	35580	31970	27700	22205	21800
9	11435	9420	8700	9260	17705	31760	37730	34530	31760	27500	22830	21800
10	11340	9920	8700	9420	17625	32180	37730	35580	31550	27305	22830	21635
Av.	11528	9990	8744	8738	16408	30453	37410	35456	32138	27996	22898	21840
11	11340	9835	8700	9580	18405	32600	37730	35580	31550	26060	22830	21635
12	10745	9835	8620	9335	18830	33020	36680	35365	31340	27110	22830	21470
13	11245	9750	8620	10090	19270	33230	37515	35365	30290	26915	22830	20670
14	11150	9665	8540	10260	19720	32900	37515	35365	31135	26720	22655	21305
15	11150	9665	8040	10520	20030	33860	37515	35365	30930	26525	21855	21305
16	11060	9080	8540	10790	20500	34075	37300	34100	30930	26330	22655	21140
17	10970	9580	8460	10970	20230	34290	37300	35150	30725	26140	22655	21140
18	10970	9500	8460	11245	21305	34720	37300	34935	30520	24900	22480	20980
19	10380	9500	8460	11030	21800	34935	36035	34935	30520	25760	22480	20980
20	10880	9420	8380	11720	22310	35150	37085	34720	29265	25570	22480	20020
Av.	10989	9583	8482	10554	20240	33878	37198	35088	30721	26203	22575	21064
21	10790	9420	8380	12015	22655	34615	36870	34505	30110	25380	22480	20820
22	10790	9340	7880	12315	23180	35580	36655	34505	30110	25190	21680	20660
23	10700	8840	8380	12625	23895	35795	36655	33240	29905	25000	22480	20660
24	10700	9260	8380	12835	23695	36010	36440	34290	29905	24815	22310	20500
25	10610	9260	8300	13150	25000	36225	36440	34075	29700	23580	22310	20500
26	10110	9180	8300	12870	25570	36440	35175	33860	29500	24445	22310	20340
27	10520	9180	8300	13810	26140	36655	36225	33860	28250	24260	22310	19540
28	10430	9100	8300	14040	26525	36120	36225	33650	29300	24075	22140	20185
29	10430	9020	7800	14385	27110	36870	36010	33440	29100	23715	21340	20030
30	10345	.....	8300	14620	27700	37085	36010	32180	28900	23535	22140	20030
31	10345	.....	8300	.....	27550	.....	36010	33020	.....	23535	.....	19875
Av.	10525	9178	8238	13267	25365	36140	36247	33693	29478	24321	22150	20285
Mon. Mean.	10998	9598	8480	10853	20822	33490	36929	34712	30779	26113	22541	21038
Date	1897											
1	19875	17570	15725	14860	24630	29500	33440	37330	36655	31970	26140	21800
2	19720	17570	15600	14980	24200	29700	33650	38380	36440	31760	25950	21800
3	18920	17435	15600	14980	25190	29905	33860	38380	36440	30500	25950	21635
4	19570	17435	15475	14300	25570	29905	32810	38380	36225	31340	25760	21470
5	19570	17300	15475	15100	25760	30110	34075	38380	35175	31340	25570	20505
6	19420	17300	15350	15225	25950	29265	34290	38380	36010	31135	25380	21140
7	19420	16365	14550	15350	26140	30315	34290	38380	36010	30930	24390	21140
8	19270	17165	15225	15475	26330	30520	34505	37330	35795	30725	25000	20980
9	19270	17030	15225	15600	25725	30520	34505	38380	35580	30520	25000	20820
10	18320	17030	15100	15725	26720	30725	34730	38380	35580	29265	24815	20660
Av.	19335	17220	15353	15160	25622	30047	34015	38170	35991	30949	25396	21195
11	19120	16895	15100	15180	26720	30930	33885	38160	35365	30110	24630	20660
12	18975	16895	14980	16110	26915	31135	35150	38160	34100	29905	24445	19700
13	18975	16760	14980	16500	27110	30085	35365	38160	35150	29700	24260	20340
14	18830	15960	14180	16760	27110	31340	35795	38160	34935	29500	23460	20185
15	18830	16630	14860	17300	27305	31550	36010	36895	34720	29300	24075	20185
16	18685	16630	14860	17845	26450	31550	36225	37945	34720	29100	23895	20030
17	17885	16500	14860	18405	27500	31760	36655	37945	34505	27850	23715	19875
18	18545	16500	14740	18175	27700	31760	35820	37945	34290	28700	23535	19720
19	18545	16370	14740	19420	27900	31970	37300	37730	33025	28500	23535	18920
20	18405	16370	14740	20030	28100	31130	37515	37730	33860	28300	23355	19570
Av.	18680	16551	14804	17572	27281	31321	35972	37883	34467	29097	23891	19919
21	18405	15440	13940	20500	28100	32180	37730	37730	33650	28100	22380	19420
22	18265	16240	14740	20980	28300	32390	37945	36680	33650	27900	23005	19270
23	18265	16110	14740	21470	27250	32390	38160	37515	33440	27700	23005	19270
24	17325	16110	14740	21970	28500	32600	38160	37515	33230	26650	22830	19120
25	18125	15980	14740	21510	28700	32810	37330	37300	33020	27500	22655	18975
26	17985	15980	14740	22830	28700	32810	38380	37300	31970	27305	22480	18030
27	17985	15850	14740	23180	28900	31970	38380	37085	32600	27110	22480	18685
28	17845	15050	13940	23535	29100	33230	38380	37085	32600	26915	21510	18685
29	17845	.....	14740	23895	29100	33230	38380	35820	32390	26720	22140	18545
30	17705	.....	14860	24260	28250	33440	38380	36870	32180	26525	21970	18105
31	16905	.....	14860	.....	29500	.....	38380	36655	.....	25280	.....	18405
Av.	17878	15845	14616	22413	28582	32705	38146	37050	32873	27064	22446	18801
Mon. Mean.	18607	16588	14908	18382	27207	31358	36112	37680	34444	28973	23910	19934

TABLE 70—Continued

DAILY RATE OF OUTFLOW—LAKE OF THE WOODS—ALL OUTLETS

Cubic Feet Per Second

Date	1898											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	18265	15225	13015	11340	10350	11530	15100	19720	21970	23180	15980	10970
2	17465	15100	12910	11245	11150	11530	15475	19875	21970	22130	15980	10970
3	18125	14980	12910	10445	11150	11530	14675	19875	21970	23180	15980	10970
4	17985	14980	12835	11150	11245	11530	15980	19875	21090	23355	15980	10170
5	17845	14860	12730	11150	11245	10575	16240	20030	22140	23355	15980	10970
6	17845	13940	11930	11150	11245	11625	16500	20185	22140	23355	15180	10970
7	17705	14740	12625	11150	11245	11625	16760	19135	22310	23355	15980	10970
8	17570	14620	12625	11060	10445	11720	17030	20340	22310	23535	15980	10970
9	16635	14500	12520	11060	11245	11815	17300	20340	22310	22485	17985	10970
10	17435	14385	12415	10260	11340	11815	16520	20500	22480	23355	19875	10970
Av.	17687	14733	12660	11001	11066	11530	16158	19988	22069	23129	16490	10890
11	17300	14385	12415	11060	11340	11915	17705	20500	21430	22830	22830	10170
12	17165	14270	12315	11060	11340	10865	17845	20660	22480	22140	22830	10970
13	17030	13470	11515	11060	11340	12015	18125	20660	22480	21470	22030	10970
14	17030	14155	12215	11060	11340	12115	18265	19770	22480	20820	22830	12520
15	16895	14040	12115	11060	10540	12215	18405	20820	22655	20030	22830	14500
16	15960	14040	12115	11060	11340	12315	18545	20820	22655	18070	19270	14500
17	16630	13925	12015	10260	11340	12415	17635	20980	22655	18265	15980	14500
18	16500	13810	12015	11060	11340	12625	18685	20980	21780	17300	13370	13700
19	16500	13810	11915	10410	11435	11680	18830	21140	22830	15980	10970	14500
20	16370	12900	11015	11060	11435	12940	18830	21140	22830	15980	10170	14500
Av.	16738	13881	11965	10915	11279	12110	18287	20747	22428	19289	18311	13083
21	16240	13590	11815	11060	11435	13045	18975	20090	22830	15980	10970	14500
22	16110	13590	11815	11060	10385	13260	18975	21305	23005	15980	10970	14500
23	15310	13480	11720	11060	11435	13370	19120	21305	23005	14930	10970	14500
24	15980	13370	11625	10260	11435	13480	18070	21470	23005	15980	10970	14500
25	15850	13370	11625	11150	11530	13700	19270	21470	21955	15980	10970	13700
26	15725	13260	11530	11150	11530	12875	19270	21635	23180	15980	10970	14500
27	15725	12460	10730	11150	11530	14040	19420	21635	23180	15980	10170	14500
28	15600	13150	11530	11150	11530	14385	19420	20585	23180	15980	10970	14500
29	15475	.....	11435	11150	10480	14500	19570	21800	23180	15980	10970	14500
30	14550	.....	11435	11150	11530	14860	19570	21800	23180	14930	10970	14500
31	15225	.....	11340	.....	11530	.....	18670	21800	.....	15980	.....	14500
Av.	15617	13284	11509	11034	11305	13752	19121	21354	22970	15789	10890	14427
Mon. Mean	16647	14014	12028	10983	11219	12464	17896	20717	22489	19285	15230	12853
Date	1899											
1	13820	14620	14155	13260	26330	32180	37515	39705	37300	27850	12625	12525
2	14620	14620	14155	12350	26330	32600	36680	39705	37085	27305	12625	12625
3	14620	14620	14155	13150	26330	32600	37730	39480	35820	25380	12625	11825
4	14620	14620	14155	13045	26330	31760	37945	39480	36870	23535	12625	12625
5	14620	13820	13240	13045	24260	33230	37945	39480	36655	21470	11825	12625
6	14620	14500	14040	13045	22310	33230	38160	38430	36655	19420	12625	12625
7	14620	14500	14040	12940	19700	33440	38160	39260	36440	17570	12625	12625
8	13820	14500	14040	12940	18975	33650	38380	39260	36440	14675	12625	12625
9	14620	14500	14040	12140	18975	33860	37550	39260	36225	14270	12625	12625
10	14620	14500	14040	12940	18975	34075	38600	39040	34960	12625	12625	11825
Av.	14460	14480	14066	12886	22851	33063	37867	39316	36445	20410	12545	12465
11	14620	14500	13925	12940	22480	33240	38820	39040	36010	12625	12625	12730
12	14620	13700	13125	12835	24445	34505	39040	39040	35795	12625	11825	14270
13	14620	14500	13925	12835	25760	34720	39040	37990	35580	12625	12625	16500
14	14620	14500	13810	12940	26115	34935	39260	38820	35365	12625	12625	19270
15	13820	14500	13810	12940	27700	35150	39260	38820	35365	11575	12625	19270
16	14620	14500	13810	12140	28700	35150	38430	38820	35150	12625	12625	19120
17	14620	14500	13810	12940	28900	35365	39480	38600	33885	12625	12625	18320
18	14620	14385	13700	16630	29100	34530	39480	38600	34720	12625	12625	19120
19	14620	13585	12900	18405	29300	35795	39705	38380	34720	12625	11825	19120
20	14620	14385	13700	19720	29500	35795	39705	37330	34505	12625	12625	19120
Av.	14540	14306	13652	14433	27200	34919	39222	38544	35110	12520	12465	17684
21	14620	14385	13590	20820	28650	36010	39705	38380	34290	12625	12625	19120
22	13820	14385	13590	21800	29905	36225	39705	38160	34075	11575	12625	18975
23	14620	14385	13590	21680	30110	36440	38655	38160	33860	12625	12625	18975
24	14620	14270	13590	23355	30315	36440	39705	37945	32810	12625	12625	18175
25	14620	14270	13480	23895	30520	35605	39705	37945	33650	12625	12625	18975
26	14620	13470	12680	24445	30930	36870	39705	37730	33440	12625	11825	18975
27	14620	14270	13370	25190	30930	36870	39705	36680	33230	12625	12625	18830
28	14620	14270	13370	25760	30290	37085	39705	37730	32810	12625	12625	18830
29	13820	.....	13370	26330	31550	37300	39705	37515	31760	11575	12625	18830
30	14620	.....	13260	25530	31760	37300	38655	37515	30315	12625	12625	18685
31	14620	.....	13260	.....	31970	.....	39705	37300	.....	12625	.....	17885
Av.	14475	14213	13377	23881	30630	36615	39514	37733	33024	12434	12545	18750
Mon. Mean	14491	14341	13669	17066	27014	34865	38888	38503	34859	15035	12518	16379

TABLE 70—Continued

DAILY RATE OF OUTFLOW—LAKE OF THE WOODS—ALL OUTLETS

Cubic Feet per Second

Date	1900											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	18685	17165	15600	13010	10005	9835	8700	9665	10005	14500	38380	40380
2	18685	17165	15600	13480	10005	9835	9750	9665	8955	14500	38600	39580
3	18545	17030	15475	12625	10005	8785	9750	9665	10090	14500	38600	40380
4	18545	16230	14675	11720	10005	9835	9750	9665	10090	14500	38020	40380
5	18545	17030	15350	10790	10005	9835	9750	8615	10175	14620	39040	40380
6	18405	16895	15350	10175	9205	9835	9750	9665	10260	14860	39040	40380
7	17606	16895	15350	10175	10005	9835	9750	9665	10260	15450	39260	40380
8	18405	16760	15225	9375	10005	9835	8700	9665	10345	18545	39260	40380
9	18265	16760	15225	10175	9920	9835	9750	9665	9380	20500	39260	39580
10	18265	16760	15100	10175	9920	8785	9750	9665	10430	23005	39480	40380
Av.	18395	16869	15295	11170	9908	9625	9540	9560	9999	16498	38894	40220
11	18265	15830	14300	10175	9920	9835	9750	9665	10520	26140	38680	40380
12	18125	16630	14980	10090	9920	9835	9750	8615	10610	28700	39705	40380
13	18125	16500	14980	10090	9120	9750	9750	9665	10700	30725	39705	40155
14	17325	16500	14980	10090	9920	9750	9750	9665	10790	31130	39705	40155
15	17985	16500	14860	9290	9920	9750	8700	9665	10970	33650	39930	40155
16	17985	16370	14860	10090	9920	9750	9750	9665	10010	34720	39930	39130
17	17985	16370	14740	10090	9920	8700	9750	9665	11150	35795	39930	39930
18	17845	15440	13940	10090	9920	9750	9750	9665	11245	36010	39130	39930
19	17845	16240	14620	10090	9920	9750	9750	8615	11340	36225	39930	39705
20	17845	16110	14620	10090	8870	9750	9750	9665	11435	36440	40155	39705
Av.	17933	16249	14688	10019	9735	9662	9645	9455	10877	32954	39680	39963
21	16905	16110	14500	10090	9920	9750	9750	9665	11530	35605	40155	39705
22	17705	15980	14500	9290	9920	9750	8615	9665	11720	36870	40155	39705
23	17570	15980	14385	10090	9920	9750	9665	9665	10765	37085	40155	38680
24	17570	15980	14385	10090	9835	8700	9665	9665	12015	37300	40155	39480
25	17570	15050	13470	10090	9835	9750	9665	9665	12115	37515	39355	39480
26	17435	15850	14270	10090	9835	9750	9665	8700	12940	37515	40380	39260
27	17435	15850	14155	10090	8785	9750	9665	9750	14270	37730	40380	39260
28	16635	15725	14155	10090	9835	9750	9665	9750	14500	36895	40380	39040
29	17300	.....	14040	9205	9835	9750	8615	9835	14500	37945	40380	39040
30	17300	.....	14040	10005	9835	9750	9665	9835	13450	38160	40380	38020
31	17300	.....	13925	.....	9835	.....	9665	9920	.....	38380	.....	38820
Av.	17339	15816	14166	9913	9763	9645	9482	9647	12781	37364	40188	39135
Mon. Mean.	17871	16347	14699	10367	9801	9644	9553	9557	11219	29210	39587	39752

Date	1901											
1	38600	33650	29300	23895	13150	27305	28100	28300	13810	13480	12015	10540
2	38380	33440	29100	23535	13150	26255	28100	28100	14860	13370	12015	11340
3	38160	32640	28100	22480	13150	27305	28300	27900	14860	13370	11115	11340
4	38160	33230	28700	17570	13370	27305	28300	26850	14740	13260	11915	11340
5	37945	33020	28500	13370	16770	27305	28300	27700	14740	13260	11915	11340
6	36930	32810	28500	13150	19270	27305	28500	27700	14620	12100	11815	11340
7	37515	32600	28300	12350	19420	27500	27650	27500	14620	13150	11815	11340
8	37515	32600	28100	13150	19420	27500	28700	27500	13450	13150	11720	10540
9	37300	32390	28100	13150	19420	26450	28900	27305	14500	13045	11720	11340
10	37085	31380	27100	13150	19570	27500	28900	27110	14500	13045	10920	11340
Av.	37759	32776	28380	16580	16669	27173	28375	27597	14470	13123	11697	11180
11	36870	31970	27700	13150	19570	27500	29100	26060	14385	12940	11720	11340
12	36870	31970	27500	13150	18920	27500	29100	26915	14385	12940	11625	11340
13	35855	31760	27500	13150	19720	27500	29100	26915	14385	11785	11625	11340
14	36440	31550	27305	12350	19875	27500	28050	26720	14270	12835	11625	11340
15	36225	31340	27110	13150	20030	27500	29300	26525	13220	12835	11530	10540
16	36225	31340	26915	13150	20340	26650	29300	26330	14155	12730	11530	11245
17	36010	30335	26115	13150	20820	27700	29300	26140	14155	12730	10730	11245
18	35795	30930	26720	13150	26915	27700	29100	24900	14040	12625	11530	11245
19	35795	30930	26525	13150	25865	27700	29100	25760	14040	12625	11435	11245
20	34780	30725	26330	13150	26915	27700	29100	25570	13925	11470	11435	11245
Av.	36087	31285	26972	13070	21897	27495	29055	26184	14096	12551	11479	11213
21	35365	30520	26140	12350	26915	27700	28050	22830	13925	12520	11435	11245
22	35150	30315	26140	13150	26915	27700	29100	19875	12760	12415	11435	10445
23	35150	30315	25950	13150	26915	26650	28900	17435	13810	12415	11340	11245
24	34935	29310	24960	13150	27110	27900	28900	15225	13700	12315	10540	11245
25	34720	29905	25760	13150	27110	27900	28900	14175	13700	12315	11340	11245
26	34505	29700	25570	13150	26060	27900	28700	15100	13700	12315	11340	11245
27	34490	29700	25380	13150	27110	27900	28700	15100	13590	11165	11340	11150
28	34290	29500	25190	12350	27110	27900	27450	15100	13590	12215	11340	11150
29	34075	.....	24815	13150	27110	28100	28500	14980	12430	12115	11340	10350
30	33860	.....	24630	13150	27110	27050	28300	14980	13480	12115	11340	11150
31	33860	.....	23645	.....	27305	.....	28300	14980	.....	12115	.....	11150
Av.	34491	29908	25289	12990	26979	27670	28527	16344	13469	12184	11279	11056
Mon. Mean.	36060	31424	26829	14213	22014	27446	28648	23148	14012	12605	11485	11147

TABLE 70—Continued
DAILY RATE OF OUTFLOW—LAKE OF THE WOODS—ALL OUTLETS
Cubic Feet per Second

Date	1902											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	11150	10880	10520	10430	11060	11065	33230	19875	19570	14500	14385	14270
2	11150	10080	9720	10430	11150	12215	33230	19875	19420	14500	13585	14270
3	11150	10880	10520	10430	11150	12415	33230	18825	19420	14500	14385	14270
4	11150	10880	10430	10430	10445	12835	33440	19875	16760	14500	14385	14270
5	10350	10880	10430	10430	11340	14740	33440	19875	14500	13450	14385	14270
6	11150	10880	10430	9630	11340	16760	32390	19875	14500	14500	14385	14270
7	11150	10880	10430	10430	11435	19270	33440	19875	13450	14500	14385	13470
8	11150	10790	10430	10430	11435	20255	33440	19875	14500	14500	14385	14270
9	11150	9990	9630	10430	11530	22655	33440	19875	14500	14500	13585	14270
10	11150	10790	10430	10430	11530	24075	33440	18825	14500	14500	14385	14270
Av.	11070	10693	10297	10350	11242	16629	33272	19665	16112	14395	14225	14190
11	11150	10790	10430	10430	10825	25190	33440	19875	14500	14500	14385	14270
12	10260	10790	10430	10430	11625	26330	33440	19875	14500	13450	14385	14270
13	11060	10790	10430	9630	11720	27500	32390	19875	14500	14500	14385	14155
14	11060	10790	10430	10430	11720	28700	33440	19875	13450	14500	14385	13355
15	11060	10700	10430	10430	11720	28855	33440	19875	14500	14500	14385	14155
16	11060	9900	9630	10430	11815	31135	33230	19875	14500	14500	13585	14155
17	11060	10700	10430	10430	11815	32390	33230	18825	14500	14500	14385	14155
18	11060	10700	10430	10430	10765	32390	33230	19720	14500	14500	14385	14155
19	10260	10700	10430	10430	11915	32600	33020	19720	14500	13450	14385	14155
20	11060	10700	10430	9630	11915	32600	31760	19720	14500	14500	14385	14155
Av.	10909	10656	10350	10270	11584	29769	33062	19724	14395	14290	14305	14098
21	11060	10610	10430	10430	11915	32600	32600	19720	13450	14385	14385	13355
22	10970	10610	10430	10520	11915	31760	32180	19720	14500	14385	14385	14155
23	10970	9810	9630	10520	12015	32810	27700	19720	14500	14385	13585	14155
24	10970	10610	10430	10610	12015	32810	23535	18870	14500	14385	14385	14155
25	10970	10610	10430	10610	10965	32810	20030	19720	14500	14385	14385	14155
26	10170	10610	10430	10700	12015	33020	19875	19570	14500	13335	14385	14155
27	10970	10610	10430	9990	12115	33020	18825	19570	14500	14385	14270	14155
28	10970	10520	10430	10880	12115	33020	19875	19570	13450	14385	14270	13355
29	10970	.....	10430	10880	12115	32180	19875	19570	14500	14385	14270	14155
30	10970	.....	9630	10970	12115	33230	19875	19570	14500	14385	13470	14155
31	10880	.....	10430	.....	12115	.....	19875	18520	.....	14385	.....	14155
Av.	10897	10499	10285	10611	11947	32726	23113	19447	14290	14290	14179	14010
Mon. Mean	10957	10624	10310	10410	11602	26375	29600	19607	14932	14324	14236	14096

Date	1903											
1	14155	13125	12790	13045	14500	33020	30725	28100	15725	14740	13240	13700
2	14155	13925	13590	13045	14620	33020	30725	26850	15725	14740	14040	13590
3	14155	13925	13590	13045	13820	32810	30520	27900	15725	14740	14040	13590
4	13355	13925	13590	12940	14860	32810	30520	27700	15600	13690	14040	13590
5	14155	13925	13590	12140	18125	32600	29470	27700	15600	14620	14040	13590
6	14155	13925	13480	12940	23895	32600	30315	27500	14350	14620	14040	12790
7	14155	13925	13480	12940	27700	31550	30315	27500	15475	14620	13925	13590
8	14155	13125	12680	12940	30725	32390	30110	27305	15475	14620	13125	13590
9	14155	13925	13480	12940	31135	32390	30110	25865	15475	14620	13925	13590
10	14155	13925	13480	12940	30540	32180	30110	22830	15475	14500	13925	13590
Av.	14075	13765	13375	12892	21992	32537	30292	26925	15483	14551	13834	13521
11	13355	13925	13480	13045	31550	32180	30110	19270	15475	13450	13925	13590
12	14040	13810	13370	12245	31760	32180	28855	16500	15350	14500	13925	13590
13	14040	13810	13370	13150	31970	31970	29905	16370	14300	14500	13810	12790
14	14040	13810	13370	13150	31970	30920	29700	16370	15350	14500	13810	13590
15	14040	13010	12570	13260	32180	31760	29700	16370	15225	14385	13010	13480
16	14040	13810	13370	13370	32390	31760	29700	15190	15225	14385	13810	13480
17	14040	13810	13370	13480	31550	31760	29500	16240	15225	14385	13810	13480
18	13240	13810	13260	13480	32600	31550	29500	16240	15225	13335	13810	13480
19	14040	13810	13260	12790	32810	31550	28250	16240	15100	14270	13810	13480
20	14040	13810	13260	13700	32810	31550	29300	16110	14070	14270	13810	12680
Av.	13891	13742	13268	13167	32159	31718	29452	16490	15052	14198	13753	13364
21	14040	13810	13260	13810	33020	30290	29300	16110	15100	14270	13810	13480
22	14040	12900	12460	13925	33020	31340	29100	16110	15100	14270	12900	13480
23	14040	13700	13150	13925	33230	31340	29100	14930	14980	14270	13700	13480
24	14040	13700	13150	14040	32390	31135	28900	15980	14980	14270	13700	13370
25	13240	13700	13150	14040	33440	31135	28900	15980	14980	13105	13700	13370
26	14040	13700	13150	13355	33440	31135	27650	15980	14860	14155	13700	13370
27	14040	13590	13150	14270	33440	30930	28700	15980	13810	14155	13700	12570
28	14040	13590	13045	14385	33440	29880	28500	15980	14860	14155	13700	13370
29	14040	.....	12245	14385	33440	30930	28500	15850	14860	14155	12900	13370
30	14040	.....	13045	14500	33230	30725	28300	14800	14740	14155	13700	13370
31	14040	.....	13045	.....	32180	.....	28100	15725	.....	14040	.....	13370
Av.	13967	13586	12986	14063	33115	30884	28641	15766	14827	14091	13551	13327
Mon. Mean	13978	13706	13203	13374	29219	31713	29435	19599	15121	14274	13713	13402

TABLE 70—Continued

DAILY RATE OF OUTFLOW—LAKE OF THE WOODS—ALL OUTLETS

Cubic Feet Per Second

Date	1904											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	13370	13150	12940	12835	13125	15600	16760	17030	16630	15725	14270	12315
2	13370	13150	12940	12835	13925	15725	16895	17030	16630	14550	14620	12215
3	12570	13150	12940	12035	14040	15725	15845	17030	16630	15600	15225	12215
4	13370	13150	12940	12835	14155	15850	16895	17030	15580	15600	18975	11415
5	13370	13045	12940	12835	14155	14800	16895	17030	16500	15600	22655	12115
6	13370	13045	12140	12835	14270	15980	16895	17030	16500	15475	21855	12115
7	13370	12245	12940	12835	14385	15980	16895	15980	16500	15475	22655	12115
8	13370	13045	12940	12835	13585	15980	16895	17030	16500	15475	22655	12115
9	13370	13045	12940	12835	14500	16110	17030	17030	16500	14300	22480	12015
10	12460	13045	12940	12035	14500	16110	15980	17030	16370	15350	17570	12015
Av	13199	13007	12860	12675	14064	15786	16698	16925	16434	15315	19296	12065
11	13260	13045	12940	12835	14620	16110	17030	17030	15320	15350	13590	11215
12	13260	13045	12940	12940	14620	15190	17030	17030	16370	15225	13480	12015
13	13260	13045	12140	12940	14740	16240	17030	17030	16370	15225	12680	11915
14	13260	12245	12940	12940	14740	16240	17030	15980	16370	15100	13370	11915
15	13260	13045	12940	12940	14060	16370	17030	17030	16240	15100	13260	11915
16	13260	13045	12940	13045	14860	16370	17030	16895	16240	13930	13150	11915
17	12460	13045	12940	12245	14860	16370	15980	16895	16240	14980	13045	11915
18	13260	13045	12940	13015	14980	16370	17030	16895	15190	14860	12940	11115
19	13260	13045	12940	13150	14980	15450	17030	16895	16110	14860	12940	11915
20	13260	13045	12140	13150	15100	16500	17030	16895	16110	14740	12035	11915
Av	13180	12965	12780	12923	14756	16121	16925	16858	16056	14937	13049	11775
21	13260	12245	12940	13260	15100	16500	17030	15845	16110	14740	12730	11815
22	13150	13045	12940	13260	14175	16500	17030	16895	15980	14620	12625	11815
23	13150	13045	12940	13370	15225	16630	17030	16895	15980	13570	12625	11815
24	12350	12940	12940	12570	15350	16630	15980	16895	15980	14500	12520	11815
25	13150	12940	12940	13480	15350	16630	17030	16760	14930	14500	12520	11015
26	13150	12940	12940	13480	15350	15710	17030	16760	15850	14385	12415	11815
27	13150	12940	12140	13590	15475	16760	17030	16760	15850	14385	11615	11815
28	13150	12140	12940	13590	15475	16760	17030	15710	15850	14270	12415	11815
29	13150	12940	12940	13700	14125	16760	17030	16760	15850	14155	12315	11815
30	13150	.....	12940	13810	15600	16760	17030	16760	15725	13105	12315	11815
31	12350	.....	12940	.....	15600	.....	15980	16630	.....	14155	.....	11815
Av	13015	12797	12867	13411	15193	16564	16839	16606	15811	14217	12410	11742
Mon. Mean	13127	12927	12837	13003	14688	16157	16821	16790	16100	14803	14918	11857

Date	1905											
1	11015	11625	11530	11530	12015	12940	14740	34290	39260	32000	15475	15100
2	11815	11625	11530	10730	12015	13045	13630	34505	39260	33020	15475	15100
3	11815	11625	11530	11530	12015	13045	14980	34935	38030	32810	15475	14120
4	11815	11625	11530	11530	12015	11920	15100	35365	39260	32600	15475	15100
5	11815	10825	10730	11530	12115	13150	15350	35795	39040	32180	14370	15100
6	11815	11625	11530	11530	12115	13150	15475	34780	39040	31970	15350	15100
7	11815	11625	11530	11530	10885	13250	15850	36440	39040	31550	15350	15100
8	11015	11625	11530	11625	12115	13260	16240	36655	38820	30110	15350	15100
9	11815	11625	11530	10825	12215	13370	15935	37085	38820	30930	15350	15100
10	11815	11625	11530	11625	12215	13370	18125	37515	37370	30520	15350	14120
Av	11655	11545	11450	11399	11972	13051	15542	35736	38794	31769	15302	14904
11	11815	11530	11530	11625	12215	12140	19270	37730	38600	30315	15350	14980
12	11815	10730	10730	11625	12215	13480	20340	38160	38380	30110	14370	14980
13	11815	11530	11530	11720	12315	13480	21635	37150	38380	29905	15350	14980
14	11720	11530	11435	11720	11085	13590	22830	38600	38160	29700	15350	14980
15	10920	11530	11435	11720	12315	13590	23895	38820	37945	28070	15350	14980
16	11720	11530	11435	10920	12415	13700	23585	38820	37730	29100	15350	14980
17	11720	11530	11435	11720	12415	13700	25760	39040	36070	28700	15350	14000
18	11720	11530	11435	11815	12415	12580	26720	39040	37085	28500	15225	14980
19	11720	10730	10635	11815	12520	13925	27500	39040	36870	28300	14245	14980
20	11720	11530	11435	11815	12520	13925	28300	38050	36140	27900	15225	14980
Av	11669	11370	11303	11650	12243	13411	23984	38443	37566	29060	15117	14882
21	11720	11530	11435	11815	11290	14040	28900	39260	36010	27305	15225	14980
22	10920	11530	11435	11815	12625	14040	29700	39260	35365	24910	15225	14980
23	11720	11530	11435	11015	12625	14155	28880	39260	35150	23715	15225	14980
24	11720	11530	11435	11915	12625	14270	30930	39260	33490	21305	15225	14000
25	11720	11530	11435	11915	12730	13040	31550	39260	34290	18975	15225	14980
26	11720	10730	10635	11915	12730	14385	31970	39260	34075	17165	14245	14980
27	11720	11530	11435	11915	12730	14385	32390	38030	33860	15475	15100	14980
28	11720	11530	11435	11915	11605	14500	32810	39260	33650	15475	15100	14980
29	10920	.....	11435	11915	12835	14620	33230	39260	33650	14245	15100	14980
30	11720	.....	11435	11215	12940	14620	32420	39260	33440	15475	15100	14980
31	11625	.....	11435	.....	12940	.....	34075	39260	.....	15475	.....	14000
Av	11566	11430	11362	11735	12516	14236	31532	39148	34798	19047	15077	14802
Mon. Mean	11628	11450	11372	11594	12252	13556	23939	37820	36886	26381	15165	14861

TABLE 70—Continued

DAILY RATE OF OUTFLOW—LAKE OF THE WOODS—ALL OUTLETS

Cubic Feet Per Second

Date	1906											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	14980	14860	14620	13520	30520	27305	22735	23005	21470	12415	14385	12115
2	14980	14860	14620	14500	30520	27305	23715	23005	20490	12415	14385	11135
3	14980	14860	14620	14500	30520	26430	23715	22830	21305	12415	14385	12115
4	14980	13760	13640	14500	30520	26720	23715	22830	21305	12415	13290	12115
5	14980	14740	14620	14500	30520	26525	23715	21850	21140	12415	14155	12115
6	14980	14740	14620	14500	29540	26330	23715	22830	20980	12520	14040	12015
7	14000	14740	14620	14500	30520	25950	23715	22830	20980	11750	13925	12015
8	14980	14740	14620	13520	30520	25760	22555	22655	20820	13150	13810	12015
9	14980	14740	14620	14500	30520	25570	23535	22655	19680	13590	13590	11035
10	14980	14740	14620	14620	30520	24400	23535	22655	20660	14040	13480	12015
Av.	14882	14678	14522	14316	30422	26200	23465	22714	20883	12712	13944	11869
11	14980	13760	13640	14620	30520	25190	23535	22655	20500	14620	12170	12015
12	14980	14740	14620	14740	30520	25000	23535	21500	20340	14980	12940	12015
13	14980	14740	14620	14860	29540	24815	23535	22480	20185	15350	12730	12015
14	13880	14740	14620	14980	30520	24815	23535	22480	20030	14745	12730	11915
15	14860	14740	14620	14120	30520	24630	22375	22480	19875	15850	12625	11915
16	14860	14740	14620	15225	30520	24445	23355	22480	18590	15850	12625	10935
17	14860	14740	14620	15350	30520	23465	23355	22310	19270	15980	12625	11915
18	14860	13760	13640	15475	30315	24445	23355	22310	18685	15725	11540	11915
19	14860	14740	14620	15725	30315	24260	23355	21330	14980	12520	11540	11915
20	14860	14740	14620	15850	29130	24260	23355	22140	12415	14860	12415	11915
Av.	14798	14544	14424	15095	30242	24533	23329	22216	18487	15294	12492	11847
21	13880	14740	14620	16110	29905	24260	23355	22140	12415	13880	12415	11915
22	14860	14740	14500	15390	29700	24075	22290	22140	12415	14740	12415	11815
23	14860	14740	14500	18125	29500	24075	23180	22140	11435	14620	12415	10835
24	14860	14620	14500	20185	29300	23095	23180	21970	12415	14620	12315	11815
25	14860	13640	13520	21970	28900	24075	23180	21970	12415	14620	11335	11815
26	14860	14620	14500	23895	28500	23895	23180	20990	12415	14500	12315	11815
27	14860	14620	14500	25760	27120	23895	23180	21800	12415	14500	12215	11815
28	13880	14620	14500	27305	27900	23895	23180	21800	12415	13405	12215	11815
29	14860		14500	27920	27700	23895	22025	21800	12415	14155	12215	11720
30	14860		14500	30520	27500	23895	23005	21635	11435	14155	12215	10740
31	14860		14500		27500		23005	21635		14385		11720
Av.	14682	14542	14422	22718	28502	23906	22970	21820	12219	14325	12207	11620
Mon. Mean.	14784	14591	14454	17376	29683	24879	23245	22236	17196	14118	12881	11773

Date	1907											
1	11625	11340	11060	10700	10790	10880	13370	11530	13570	19720	20820	18655
2	11625	11340	10970	10700	10790	9350	13370	11530	15100	19875	20820	20030
3	11625	10510	10140	10700	10790	10880	13370	11435	15100	20030	19290	20030
4	11625	11245	10970	10700	10790	10880	13370	9905	15225	20185	20820	19875
5	11625	11245	10970	10700	9260	10880	13370	11435	15225	20185	20820	19875
6	10795	11245	10970	10700	10880	10880	13370	11435	15225	18810	20820	19720
7	11530	11245	10970	9870	10880	10880	11840	11435	15225	20340	20820	19720
8	11530	11245	10970	10700	10880	10880	13370	11435	13820	20340	20820	18040
9	11530	11245	10970	10700	10970	9530	13370	11340	15350	20500	20820	19420
10	11530	10415	10140	10700	10970	11435	13260	11435	15350	20500	19290	19420
Av.	11504	11107	10813	10617	10700	10647	13206	11291	14919	20049	20514	19479
11	11530	11245	10880	10700	11060	11915	13260	10385	15475	20500	20820	19270
12	11530	11245	10880	10700	9530	12315	13260	12215	15475	20660	20820	19270
13	10700	11150	10880	10700	11150	12520	13260	12520	15475	19130	20820	19120
14	11530	11150	10880	9870	11150	12730	11730	12730	15600	20660	20820	19120
15	11530	11150	10880	10700	11245	12835	13150	13045	14070	20660	20820	17445
16	11530	11150	10880	10700	11245	11305	13150	13150	15725	20660	20660	18975
17	11435	10320	10050	10700	11340	12940	13150	13370	15850	20660	19130	18975
18	11435	11150	10880	10700	11435	12940	13150	12060	15850	20820	20660	18830
19	11435	11150	10880	10700	9905	13045	13150	13700	15980	20820	20660	18830
20	10605	11150	10790	10700	11435	13045	13045	13925	16240	19290	20660	18830
Av.	11326	11086	10788	10617	10950	12559	13030	12710	15574	20836	20587	18866
21	11435	11060	10790	9870	11435	13150	11305	14040	16760	20820	20500	18685
22	11435	11060	10790	10700	11435	13150	11815	14270	15635	20820	20500	17155
23	11435	11060	10790	10700	11530	11620	11720	14385	15570	20820	20500	18685
24	11435	10230	9960	10700	11530	13260	11720	14620	17845	20820	18970	18545
25	11435	11060	10790	10700	11530	13260	11720	13090	18265	20820	20500	18545
26	11340	11060	10790	10700	10060	13260	11625	14740	18545	20820	20500	18545
27	10510	11060	10790	10700	11530	13260	11625	14860	18830	19290	20340	18545
28	11340	11060	10700	9870	11530	13260	10095	14980	19120	20820	20340	18545
29	11340		10700	10790	11530	13260	11625	14980	17740	20820	20185	17015
30	11340		10700	10790	11530	11840	11530	15100	19570	20820	20185	18405
31	11340		9870		10970		11530	15100		20820		18405
Av.	11308	10956	10606	10552	11323	12932	11483	14561	17988	20681	20252	18280
Mon. Mean.	11377	11057	10732	10595	11001	12046	12538	12909	16160	20381	20451	18856

TABLE 70—Continued
DAILY RATE OF OUTFLOW—LAKE OF THE WOODS—ALL OUTLETS
Cubic Feet Per Second

Date	1908											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	18405	18125	16315	18405	18685	25760	26915	25380	23180	17165	11840	10700
2	18405	16595	17845	18405	18830	26140	26915	23660	23005	17165	13370	10700
3	18405	18125	17985	18405	17300	26330	26915	25190	22480	17030	13260	10610
4	18405	18125	17895	18405	18975	26525	26915	25190	21800	15500	13260	10610
5	16875	18125	18125	16875	18975	26720	25385	25190	20660	17030	13260	10610
6	18405	18125	18125	18405	19120	26720	26720	25000	18190	17030	13150	9080
7	18405	18125	18265	18405	19120	25190	26720	25000	18685	17030	13150	10610
8	18405	18125	16735	18405	19270	26720	26720	25000	17705	16895	11620	10610
9	18405	16595	18405	18405	19420	26720	26525	23285	17705	16895	13150	10610
10	18405	18125	18405	18405	17890	26720	26525	24815	17705	16895	13045	10610
Av.	18252	17819	17819	18252	18758	26354	26626	24771	20111	16864	12911	10475
11	18405	18125	18405	18405	19720	26915	26330	24815	17705	15365	13045	10520
12	16875	17985	18405	16875	19875	26915	24800	24630	17570	16895	13045	10520
13	18405	17985	18405	18405	20030	26915	26140	24630	16040	16760	13045	8990
14	18405	17985	18405	18405	20185	25385	26140	24630	17570	16500	12940	10520
15	18405	17985	16875	18405	20340	26915	25950	24445	17570	15725	11305	10520
16	18265	16455	18405	18405	20660	26915	25950	22915	17570	15100	12730	10520
17	18265	17985	18405	18405	19450	26915	25950	24445	17570	14385	12015	10520
18	18265	17985	18405	18405	21140	27110	25760	24260	17570	12280	11435	10520
19	16735	17985	18405	16875	21470	27110	24230	24260	17435	13700	10790	10520
20	18265	17985	18405	18405	21800	27110	25570	24075	15905	13700	10700	8990
Av.	18029	17846	18252	18099	20467	26820	25682	24310	17250	15041	12105	10214
21	18265	17985	18405	18405	22140	25580	25570	24075	17435	13700	10700	10520
22	18265	17985	16875	18545	22480	27110	25570	23895	17435	13700	9170	10520
23	18265	16455	18405	18545	22830	27110	25570	22365	17435	13590	10700	10430
24	18265	17985	18405	18545	21650	27110	25570	23715	17300	13590	10700	10430
25	18265	17985	18405	18545	23535	27110	25570	23715	17300	12060	10700	10430
26	16735	17985	18405	17015	23895	27110	24040	23715	17300	13480	10700	10430
27	18265	17985	18405	18545	24075	27110	25380	23535	15770	13480	10700	8900
28	18265	17985	18405	18545	24445	25385	25380	23535	17300	13480	10700	10430
29	18125	17845	16875	18685	24815	26915	25380	23355	17165	13480	9170	10430
30	18125	.....	18405	18685	25190	26915	25380	21825	17165	13370	10700	10430
31	18125	.....	18405	.....	24040	.....	25380	23180	.....	13370	.....	10430
Av.	18088	17799	18127	18406	23554	26745	25345	23355	17161	13391	10394	10307
Mon. Mean.	18122	17822	18068	18252	21011	26640	25867	24120	18174	15043	11803	10331

Date	1909											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	10430	10345	10175	10090	10090	10880	10970	9330	11150	10970	10880	10880
2	10430	10345	10175	10090	8090	10880	10970	10970	11150	10970	10880	10880
3	8860	10345	10175	10090	10090	10880	10970	10970	11150	8740	10880	10880
4	10430	10345	10175	7990	10090	10970	9240	10970	11150	10970	10880	10880
5	10430	10345	10175	10090	10090	10970	10970	10970	9330	10970	10880	8860
6	10430	10345	10175	10090	10090	9220	10970	10970	11150	10970	10880	10880
7	10430	8705	8485	10090	10090	10970	10970	10970	11150	10970	8860	10880
8	10430	10345	10175	10090	10090	10970	10970	9330	11150	10970	10880	10880
9	10430	10345	10175	10090	8090	10970	10970	10970	11150	10970	10880	10880
10	8860	10260	10175	10090	10090	10970	10970	10970	11150	8740	10880	10880
Av.	10116	10173	10006	9880	9690	10768	10797	10642	10968	10524	10678	10678
11	10430	10260	10175	7990	10090	10970	9240	10970	11150	10970	10880	10880
12	10430	10260	10175	10090	10175	10970	10970	10970	9240	10970	10880	8860
13	10430	10260	10175	10090	10175	9220	10970	10970	11060	10970	10880	10880
14	10430	8620	8485	10090	10175	10970	10970	10970	11060	10970	8860	10880
15	10430	10260	10175	10090	10175	10970	10970	9330	11060	10880	10880	10880
16	10430	10260	10090	10090	8260	10970	10970	10970	11060	10880	10880	10880
17	8860	10260	10090	10090	10260	10970	10970	10970	11060	8650	10880	10880
18	10430	10260	10090	7990	10260	10970	9240	10970	11060	10880	10880	10880
19	10430	10260	10090	10090	10345	10970	10970	10970	9240	10880	10880	8860
20	10430	10260	10090	10090	10345	9220	10970	10970	11060	10880	10880	10880
Av.	10273	10096	9964	9670	10026	10620	10624	10806	10705	10693	10678	10476
21	10345	8620	8400	10090	10430	10970	10970	10970	11060	10880	8860	10880
22	10345	10260	10090	10090	10430	10970	10970	9330	11060	10880	10880	10880
23	10345	10260	10090	10090	8520	10970	10970	11060	11060	10880	10880	10880
24	8775	10260	10090	10090	10610	10970	10970	11060	11060	8650	10880	10880
25	10345	10260	10090	7990	10610	10970	9240	11060	11060	10880	10880	10880
26	10345	10260	10090	10090	10700	10970	10970	11060	9240	10880	10880	8860
27	10345	10260	10090	10090	10700	9220	10970	11060	10970	10880	10880	10880
28	10345	8620	8400	10090	10790	10970	10970	11060	10970	10880	8860	10880
29	10345	.....	10090	10090	10790	10970	10970	9510	10970	10880	10880	10880
30	10345	.....	10090	10090	8790	10970	10970	11150	10970	10880	10880	10880
31	8775	.....	10090	.....	10880	.....	10970	11150	.....	8650	.....	10880
Av.	10060	9850	9783	9880	10295	10795	10813	10770	10842	10475	10476	10696
Mon. Mean.	10147	10053	9913	9810	10013	10728	10747	10740	10838	10561	10611	10619

TABLE 70—Continued
DAILY RATE OF OUTFLOW—LAKE OF THE WOODS—ALL OUTLETS
Cubic Feet Per Second

Date	1910											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	10880	11060	11060	22480	25750	26140	19875	11150	10345	10260	8940	8700
2	9100	11060	11060	22480	27900	26140	19875	11150	10345	8080	8860	8700
3	10970	11060	11060	20465	27900	25950	17900	11060	10345	10260	8860	8700
4	10970	11060	11150	22830	27900	25760	19720	11060	8320	10260	8860	6580
5	10970	11060	11150	23005	27900	23830	19570	10970	10260	10260	8780	8700
6	10970	9180	9310	23005	27300	25570	19570	10970	10260	10260	6740	8700
7	10970	11060	11150	23180	27900	25380	19420	9120	10260	10260	8780	8700
8	10970	11060	11150	23355	25750	25380	19270	10880	10260	10260	8780	8700
9	9100	11060	11150	23535	27700	25190	17705	10790	10260	8080	8780	8700
10	10970	11060	11150	21525	27700	24815	14420	10790	10260	10175	8780	8700
Av.	10587	10872	10939	22586	27430	25416	18733	10794	10092	9816	8616	8488
11	10970	11060	12315	23715	27700	23535	14740	10790	8235	10175	8780	6580
12	10970	11060	12520	23895	27700	20210	13590	10790	10175	10175	8780	8700
13	10970	9180	10175	24075	27700	21305	13480	10700	10175	10090	6740	8700
14	10970	11060	11530	24075	27500	21140	13480	8940	10175	10090	8780	8620
15	10970	11060	11530	24260	25350	20980	13480	10700	10175	10090	8780	8620
16	9100	11060	11530	24445	27500	20980	13370	10610	10175	7825	8700	8620
17	10970	11060	11530	22440	27305	20980	11550	10610	10175	10005	8700	8620
18	10970	11060	11530	24815	27305	20820	13260	10610	8235	9920	8700	6500
19	10970	11060	11530	24815	27305	18890	13260	10520	10175	9835	8700	8620
20	10970	9180	9690	25000	27110	20660	13150	10520	10175	9835	6660	8620
Av.	10783	10684	11388	24154	27248	20950	13336	10479	9787	9804	8332	8220
21	10970	11060	11530	25190	27110	20660	13045	8760	10175	9750	8700	8620
22	10970	11060	11530	25190	24765	20500	12835	10520	10175	9665	8700	8620
23	9100	11060	11530	25380	26915	20500	12015	10520	10175	7400	8700	8620
24	10970	11060	11530	23380	26915	20340	9995	10430	10175	9500	8700	8620
25	10970	11060	11530	25950	26915	20340	11625	10430	8235	9420	8700	6500
26	10970	11060	11530	26330	26720	18255	11530	10430	10260	9340	8700	8620
27	10970	9180	9690	27305	26720	20185	11435	10430	10260	9260	6660	8620
28	10970	11060	11530	27900	26525	20030	11435	8670	10260	9180	8700	8620
29	10970	.....	11915	27900	24375	20030	11340	10430	10260	9100	8700	8620
30	9100	.....	14740	27900	26330	20030	11245	10345	10260	6840	8700	8620
31	10970	.....	17570	.....	26330	.....	9425	10345	.....	9020	.....	8620
Av.	10630	10825	12239	26242	26329	20087	11448	10119	10024	8952	8496	8427
Mon. Mean	10665	10791	11545	24327	26980	22151	14407	10453	9967	9505	8481	8380
Date	1911											
1	6550	8540	8460	8300	8540	8540	8620	8620	7905	4310	5720	5520
2	8620	8540	8460	5080	8540	8540	6640	8620	7830	6705	5720	5520
3	8620	8540	8380	8300	8540	8540	8620	8620	5515	6630	5720	3170
4	8620	8460	8380	8300	8540	6370	8620	8620	7680	6630	5650	5520
5	8620	6440	6170	8300	8540	8540	8620	8620	7680	6560	3390	5520
6	8620	8460	8380	8300	8540	8540	8620	6910	7605	6490	5650	5520
7	8620	8460	8380	8300	6310	8540	8620	8620	7605	6420	5650	5520
8	6550	8460	8380	8380	8540	8540	8620	8620	7530	3880	5650	5520
9	8620	8460	8380	6060	8540	8540	6640	8620	7530	6350	5650	5520
10	8620	8460	8380	8380	8540	8540	8620	8620	5290	6350	5585	3170
Av.	8206	8282	8175	7860	8317	8323	8224	8449	7217	6033	5438	5050
11	8540	8460	8380	8380	8540	6450	8620	8620	7455	6280	5585	5520
12	8540	6440	6170	8380	8540	8620	8620	8620	7455	6280	3325	5520
13	8540	8460	8380	8380	8540	8620	8620	6910	7455	6210	5585	5520
14	8540	8460	8380	8460	6310	8620	8620	8620	7455	6210	5585	5520
15	6470	8460	8380	8460	8540	8620	8620	8540	7455	3740	5585	5520
16	8540	8460	8380	6140	8540	8620	6640	8540	7455	6140	5585	5520
17	8540	8460	8380	8460	8540	8620	8620	8540	5215	6070	5520	3170
18	8540	8460	8380	8460	8540	6450	8620	8460	7455	6070	5520	5520
19	8540	6440	6170	8460	8540	8620	8620	8460	7380	6070	3260	5520
20	8540	8460	8380	8460	8540	8620	8620	6750	7380	6000	5520	5520
Av.	8333	8056	7938	8204	8317	8186	8422	8206	7216	5907	5107	5285
21	8540	8460	8380	8540	6310	8620	8620	8380	7305	5930	5520	5520
22	6470	8460	8380	8540	8540	8620	8620	8380	7305	3460	5520	5520
23	8540	8460	8380	6220	8540	8620	6640	8300	7230	5860	5520	5520
24	8540	8460	8380	8540	8540	8620	8620	8300	4990	5860	5520	3170
25	8540	8460	8380	8540	8540	6450	8620	8220	7155	5860	5520	5520
26	8540	6440	6170	8540	8540	8620	8620	8220	7080	5790	3260	5520
27	8540	8460	8300	8540	8540	8620	8620	6430	7080	5790	5520	5520
28	8540	8460	8300	8540	6310	8620	8620	8140	7005	5790	5520	5520
29	6470	.....	8300	8540	8540	8620	8620	8060	6930	3320	5520	5520
30	8540	.....	8300	6220	8540	8620	6640	7980	6855	5790	5520	5520
31	8540	.....	8300	.....	8540	.....	8620	7980	.....	5720	.....	3170
Av.	8164	8208	8143	8076	8135	8403	8260	8035	6894	5379	5294	5093
Mon. Mean	8232	8180	8087	8047	8252	8304	8301	8224	7109	5760	5280	5141

TABLE 70—Continued

DAILY RATE OF OUTFLOW—LAKE OF THE WOODS—ALL OUTLETS

Cubic Feet Per Second

Date	1912											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	5520	5455	5790	5930	6350	6140	5195	5455	5070	6420	10430	8320
2	5520	5455	5790	5930	6420	3940	5130	5455	5930	6420	10430	10430
3	5520	5455	3620	5930	6420	6140	5130	5455	5930	6490	8805	10430
4	5520	3290	5790	5930	6490	6140	5130	4250	6000	6930	10345	10430
5	5520	5520	5790	5930	4270	6070	5130	5520	6000	8460	10345	10430
6	5520	5520	5790	5930	6490	6000	5130	5520	6000	7470	10345	10430
7	3320	5520	5790	3740	6560	5860	3670	5520	6000	9020	10090	10430
8	5520	5520	5860	6000	6560	5720	5130	5585	5140	9180	9580	8320
9	5520	5520	5860	6000	6630	3450	5130	5585	6000	9340	9020	10430
10	5520	5520	3690	6000	6630	5520	5195	5585	6000	9420	6760	10430
Av.	5300	5278	5377	5732	6282	5498	4997	5393	5807	7915	9615	10008
11	5520	3355	5860	6000	6705	5520	5195	4380	6070	9580	8300	10430
12	5520	5585	5860	6000	4485	5520	5195	5650	6070	9665	8940	10430
13	5520	5585	5860	6070	6780	5520	5195	5650	6070	8440	9580	10430
14	3320	5585	5860	3810	6780	5520	3735	5720	6070	9920	9920	10430
15	5520	5650	5860	6070	6780	5520	5195	5720	5210	10005	10005	8320
16	5520	5650	5860	6070	5720	3385	5260	5720	6070	10005	10090	10430
17	5520	5650	3690	6070	6705	5650	5260	5790	6070	10090	8465	10430
18	5455	3420	5860	6140	6630	5720	5260	4520	6070	10175	9920	10430
19	5455	5650	5860	6140	4340	5790	5260	5790	6070	10175	10005	10430
20	5455	5720	5860	6140	6490	5790	5260	5790	6140	8950	10005	10430
Av.	5281	5185	5643	5851	6248	5394	5082	5473	5991	9700	9523	10219
21	3255	5720	5860	3886	6420	5720	3865	5860	6140	10260	10096	10430
22	5455	5720	5860	6210	6420	5720	5325	5860	5280	10345	10260	8320
23	5455	5720	5860	6210	6350	4280	5325	5860	6210	10345	10345	10430
24	5455	5720	3690	6210	6350	5585	5325	5860	6210	10345	8060	10430
25	5455	3490	5860	6280	6280	5520	5325	4590	6280	10345	10430	10430
26	5455	5790	5860	6280	4060	5455	5390	5860	6280	10345	10430	10345
27	5455	5790	5860	6280	6210	5390	5390	5860	6350	9035	10430	10345
28	3255	5790	5860	4020	6210	5325	3930	5930	6350	10345	10430	10345
29	5455	5790	5930	6350	6210	5260	5390	5930	5560	10430	10430	8235
30	5455	.....	5930	6350	6210	3825	5390	5930	6420	10430	10430	10345
31	5455	.....	3760	.....	6140	.....	5455	5930	.....	10430	.....	10345
Av.	5055	5503	5484	5807	6078	5268	5101	5776	6108	10241	10134	10000
Mon. Mean	5207	5316	5501	5797	6199	5367	5061	5553	5969	9316	9757	10073

Date	1913											
1	10345	10345	7230	6705	15475	17495	17385	15600	14385	8460	8300	7980
2	10345	8415	5070	6705	15475	19875	19420	15600	14270	8460	6510	8220
3	10345	10345	7230	6630	15475	20030	19420	14010	14270	8460	7890	8220
4	10345	10345	7230	6630	13125	20030	19420	15600	14270	8460	8220	8220
5	8195	10345	7230	6630	15600	20185	19270	15600	14270	6210	8220	8220
6	10345	10345	7230	4520	15600	20185	16790	15600	14270	7970	8220	8220
7	10345	10345	7230	6630	15600	20340	18545	15600	12530	8460	8220	6220
8	10345	10345	7230	6705	15725	17960	17985	15600	14270	8460	8220	7980
9	10345	8415	5070	6705	15725	20340	15475	15600	14270	8460	6430	8220
10	10345	10345	7230	6705	15725	20340	13370	14010	14270	8380	7890	8220
Av.	10130	9959	6798	6457	15353	19678	17708	15282	14108	8178	7812	7972
11	10345	10260	7230	6780	13500	20340	13370	15600	14270	8380	8220	8220
12	8195	10175	7230	6780	15850	20340	13370	15475	14270	6130	8220	8220
13	10345	10090	7230	4745	16110	20340	11185	15475	14270	7600	8220	8220
14	10345	9180	7230	6855	18545	20340	13370	15475	12530	8380	8220	6220
15	10345	8220	7230	6930	18545	17805	13370	15475	14270	8380	8220	7980
16	10345	5300	5070	7005	18685	20185	13370	15475	14270	8380	6430	8140
17	10345	7230	7230	7080	18685	20030	13370	13760	14270	8380	7890	8140
18	10345	7230	7230	7155	16480	20030	13370	15350	14270	8380	8220	8140
19	8195	7230	7230	7230	18830	19875	13260	15225	14385	6130	8220	8140
20	10345	7230	7230	5270	18975	19875	10860	15100	14270	7600	8220	8140
Av.	9915	8215	7014	6583	17421	19916	12889	15241	14108	7774	8008	7956
21	10345	7230	7230	7830	19120	19875	12730	14980	11410	8300	8220	6140
22	10345	7230	7230	9580	19120	17495	12730	14980	12215	8300	8220	7820
23	10345	5300	5070	11060	19120	19875	13045	14860	11530	8300	6430	8060
24	10345	7230	7155	12215	19270	19720	15600	13150	11060	8300	7890	8060
25	10345	7230	7080	13370	17070	19720	15600	14740	10790	8300	8220	6930
26	8195	7230	7005	14270	19420	19720	15600	14620	10430	6050	8220	8060
27	10345	7230	6930	13240	19570	19720	13415	14620	9750	7520	8220	8060
28	10345	7230	6930	15350	19570	19720	15600	14500	6720	8300	8220	6060
29	10345	.....	6855	15350	19720	17190	15600	14500	7865	8300	8220	7820
30	10345	.....	4620	15350	19720	19570	15600	14385	8460	8300	6430	8060
31	10345	.....	6780	.....	19720	.....	15600	12795	.....	8300	.....	8060
Av.	10150	6989	6626	12762	19220	19261	14647	14376	10023	8025	7829	7557
Mon. Mean	10068	8487	6807	8600	17392	19618	15067	14947	12746	7993	7883	7820

TABLE 70—Continued

DAILY RATE OF OUTFLOW—LAKE OF THE WOODS—ALL OUTLETS

Cubic Feet Per Second

Date	1914											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	8060	6670	8450	10175	10345	16435	18525	20185	13045	13150	8220	10005
2	8140	8060	10090	10175	10430	17165	19720	18300	13045	13150	9920	10005
3	8140	8060	10090	10175	8880	17165	19570	20030	13045	13150	9835	10005
4	6350	8060	10090	10090	10700	17300	19570	19875	13045	11115	9750	10005
5	8010	8060	10175	8790	10790	17435	19350	19720	13045	13045	9665	10005
6	8140	7460	10175	10090	10880	17570	19720	19720	12755	13045	9580	8505
7	8140	7460	10175	10090	10970	16165	19875	19570	13045	13045	9580	9920
8	8140	6670	8620	10090	11060	17985	20030	19570	13045	12940	7965	9835
9	8140	8060	10260	10090	11150	18125	20185	17690	13045	12940	9750	9835
10	8140	8060	10345	10005	9605	18265	20340	19270	13045	12940	9750	9835
Av	7940	7662	9847	9977	10481	17361	19689	19393	13016	12852	9402	9766
11	6350	8060	10345	10005	11340	18265	20340	19270	13045	11405	9835	9835
12	8010	8060	10430	8705	11340	18405	19150	19120	13045	12045	9920	9835
13	8140	8060	10430	9405	11340	18405	20500	18975	11430	12835	9920	8335
14	8140	8140	10430	10005	11340	16865	20660	18975	13150	12730	9920	9835
15	8140	6750	8790	10005	11435	17445	20660	18830	13150	11530	8220	9835
16	8140	8140	10430	10005	11435	18685	20660	17100	13260	11150	9920	9835
17	8140	8140	10430	10005	9795	18830	20660	18685	13260	10970	9920	9750
18	6270	8140	10430	10005	11435	18975	20660	18685	13260	9180	9920	9750
19	7930	8140	10345	8705	11435	18975	19900	18685	13260	9770	9920	9750
20	7980	8140	10345	10090	11530	19120	20660	18830	11540	10175	9920	8740
Av	7724	7977	10241	9694	11243	18397	20385	18716	12840	11179	9742	9550
21	7905	8220	10345	10090	12940	17590	20660	18830	13260	9920	9920	9750
22	7830	6910	8705	10090	13590	19420	20660	18830	13260	9920	8220	9750
23	7755	8860	10345	10090	14040	19570	20660	17100	13260	9920	9920	9750
24	7755	9500	10345	10090	12860	19720	20660	18545	13260	9920	9920	9750
25	5965	10005	10260	10175	14980	19875	20500	18265	13260	7990	9920	8740
26	7700	10090	10260	8875	15350	20185	19150	16760	13260	9920	9920	9750
27	7905	10090	10260	9575	15850	20340	20500	15475	11540	9920	10005	8740
28	7980	10090	10260	10260	16240	18505	20500	14155	13260	9920	10005	9750
29	8060	.....	8620	10260	16630	18790	20340	13045	13150	9920	8305	9750
30	8060	.....	10260	10345	17030	19875	20340	12695	13150	9920	10005	9750
31	8060	.....	10175	.....	15390	.....	20185	13045	.....	9920	.....	9835
Av	7725	9221	9985	9985	14991	19387	20378	16068	13066	9745	9614	9574
Mon. Mean	7794	8220	10023	9885	12327	18382	20158	17995	12974	11210	9586	9638
	*1915											
1	8750	10175	10175	9580	16110	19120	23055	24850	12315	10090	9920	9835
2	9460	10175	10175	9420	14470	18975	23355	25380	12315	10090	9920	9835
3	8680	10175	10090	9340	16110	18975	23355	25380	12315	8860	9920	9835
4	9545	10175	10090	8910	16110	18975	23235	25190	12315	10090	9835	9835
5	9545	10175	10090	9100	16110	18565	23715	25000	10865	10090	9835	9580
6	9920	10175	10005	9100	16110	17875	23895	25000	12315	10090	9835	9750
7	9920	8525	8435	9260	16110	18975	24260	24815	12315	10005	9340	9665
8	10005	10175	10005	12940	16110	18975	24630	23910	12315	10005	9920	9665
9	10005	10175	10005	15475	14470	18975	24815	24260	12215	10005	9920	9665
10	8275	10175	9920	16110	16110	19120	24815	23715	12215	8775	9920	9665
Av	9410	10010	9899	10923	15782	18853	23913	24750	12150	9810	9837	9533
11	10090	10175	9835	15010	16110	19120	23975	23535	12215	10005	9920	9665
12	10090	10175	9665	16110	16110	19120	24815	23355	10765	10005	9920	8950
13	10090	10175	9580	16110	16110	18020	24815	23180	12215	10005	9920	9750
14	10090	8525	8670	16110	16110	19270	24815	23180	12215	10005	9340	9835
15	10090	10175	9420	16110	16110	19270	24630	22110	12215	9920	9920	9920
16	10090	10175	9420	16110	15210	19270	24630	22830	12215	9920	9920	10005
17	8360	10175	9340	16110	16110	19270	24630	22655	12115	8690	9920	10005
18	10090	10175	9340	14430	17570	19270	23605	22480	12115	9920	9920	10005
19	10175	10260	9260	16110	19875	18970	24445	22310	10665	9920	9920	9205
20	10175	10260	9260	16110	22480	18330	24445	21635	12115	9920	9920	10005
Av	9934	10027	9379	15832	17180	18991	24480	22727	11885	9831	9862	9735
21	10175	8610	8370	16110	22480	19270	24260	18975	12115	9920	9340	10005
22	10175	10260	9260	16110	20980	19570	24260	16410	12115	9920	9920	10005
23	10175	10260	9260	16110	18820	19875	24260	14745	12115	9920	9920	10005
24	8445	10260	9340	16110	19570	19875	24260	12970	12115	8690	9920	10005
25	10175	10260	9340	14430	19570	19875	23790	11695	12115	9920	9920	7975
26	10175	10260	9420	16110	19570	19875	25000	11695	10665	9920	9920	8565
27	10175	10260	9420	16110	19420	19085	25380	11695	12115	9920	9835	10005
28	10175	8610	8540	16110	19420	20185	25570	11835	12115	9920	9255	10005
29	10175	.....	9500	16110	19270	23180	25760	11695	12115	9920	9835	10005
30	10175	.....	9580	16110	18290	23180	25760	11835	11720	9920	9835	10005
31	8445	.....	9580	.....	19270	.....	25570	11835	.....	8690	.....	10005
Av	9860	9848	9237	15942	19696	20397	24897	13217	11931	9696	9770	9690
Mon. mean	9739	9970	9496	14232	17622	19414	24445	20005	11989	9776	9823	9654

* The daily discharge for 1915 is based upon the adopted rating table (Table 92), which may be slightly changed by excavation below the outlets during 1915.

* TABLE 71

ESTIMATED DAILY DISCHARGE—MILL "A"—LAKE OF THE WOODS MILLING CO., KEEWATIN, ONTARIO

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

Cubic Feet Per Second

1913

Date	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1					840	290	280			885	547	669
2					840	600	575			905	224	823
3					840	850	845			895	750	798
4					290	850	850			895	740	803
5					500	850	850				770	800
6					840	850	280			507	750	819
7					840	850	570			912	800	230
8					840	290	850			897	750	530
9					840	605	850			907	224	790
10					840	850	850		795	900	850	812
11					290	855	850		796	900	800	768
12					550	855	850		837		760	783
13					850	855	280		841	548	760	805
14					860	855	570			890	760	226
15					860	290	850		833	882	800	537
16					860	605	850		862	882	227	825
17					850	855	850		844	897	750	810
18					290	855	850		770	897	750	825
19					560	855	850		853		760	825
20					850	850	280		881		740	787
21					850	855	570			557	800	222
22					850	290	850		702	890	750	566
23					850	230	850		730	897	224	816
24					290	500	850		725	897	750	805
25					100	870	850		704	882	760	226
26					570	890	850		718		770	805
27					860	890	280		781	557	700	780
28					850	870	570			897	750	220
29					850	290	850		200	908	800	562
30					850	610	850		715	897	229	836
31					850		850			890		836

1914

1	795	6	6	840	795	178	63	946	863	886	43	821
2	800	875	860	843	799	840	185	45	847	776	196	848
3	822	805	856	843	75	980	209	804	847	785	196	846
4	6	870	828	784	834	860	209	814	851	43	222	831
5	720	875	824	105	839	920	626	825	842	836	202	846
6	838	805	862	841	859	925	790	826	784	841	214	117
7	870	835	803	883	855	9	805	804	858	819	211	209
8	868	6	6	823	841	905	842	823	885	825	3	210
9	862	870	837	297	831	838	772	39	849	830	751	206
10	859	875	840	256	75	890	772	893	856	882	742	204
11	6	870	860	264	884	928	775	899	847	3	832	206
12	717	907	863	66	865	858	51	890	853	8	857	206
13	772	920	868	249	890	847	766	974	40	817	843	108
14	826	825	882	867	886	18	770	968	944	832	843	821
15	807	6	6	873	845	202	782	927	919	801	42	826
16	880	870	864	842	865	845	778	55	868	825	802	820
17	821	875	862	850	75	850	768	947	929	797	805	819
18	6	875	878	826	822	912	806	953	936	9	800	778
19	702	880	878	66	828	988	629	965	937	142	805	851
20	845	885	890	852	835	985	803	958	33	827	876	121
21	762	875	860	850	803	201	793	923	938	742	848	851
22	165	6	6	865	876	1,000	787	969	923	760	59	860
23	180	885	860	850	934	962	769	52	907	764	856	172
24	160	885	872	838	52	910	769	987	878	756	854	839
25	6	895	882	857	873	1,000	347	966	915	3	795	127
26	695	905	892	66	880	1,000	13	963	898	798	795	834
27	853	920	886	229	849	975	749	886	43	740	858	73
28	868	880	874	844	875	18	770	931	811	817	859	841
29	875		6	878	892	192	772	899	896	793	100	850
30	890		864	772	890	938	780	814	833	820	818	856
31	881		828		52		808	836		800		872

* For 1915 records see page 327.

* TABLE 72

ESTIMATED DAILY DISCHARGE—MILL "C"—LAKE OF THE WOODS MILLING CO., KEEWATIN, ONT.

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

Cubic Feet Per Second

1913

Date	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	.....	.....	700	205	210	.....	.....	650	650	450
2	.....	.....	.....	.....	700	505	515	.....	.....	650	95	730
3	.....	.....	.....	.....	700	715	725	.....	.....	650	360	735
4	.....	.....	.....	.....	200	715	730	.....	.....	650	685	730
5	.....	.....	.....	.....	510	715	730	.....	.....	.....	655	725
6	.....	.....	.....	.....	710	715	210	.....	.....	680	685	695
7	.....	.....	.....	.....	710	715	515	.....	.....	650	720	90
8	.....	.....	.....	.....	710	205	725	.....	.....	735	685	445
9	.....	.....	.....	.....	710	505	725	.....	.....	685	95	712
10	.....	.....	.....	.....	710	725	725	.....	.....	630	300	670
11	.....	.....	.....	.....	200	730	725	.....	.....	665	650	680
12	.....	.....	.....	.....	.....	730	735	.....	.....	90	650	700
13	.....	.....	.....	.....	.....	730	215	.....	.....	440	685	695
14	.....	.....	.....	.....	.....	730	520	.....	.....	725	685	100
15	.....	.....	.....	.....	.....	215	735	.....	.....	690	610	465
16	.....	.....	.....	.....	.....	520	735	.....	.....	680	95	700
17	.....	.....	.....	.....	.....	725	735	.....	.....	685	430	725
18	.....	.....	.....	.....	.....	725	735	.....	.....	246	742	715
19	.....	.....	.....	.....	.....	725	735	.....	.....	396	720	710
20	.....	.....	.....	.....	.....	725	215	.....	.....	680	680	705
21	.....	.....	.....	.....	.....	725	520	.....	.....	680	720	150
22	.....	.....	.....	.....	.....	210	725	.....	.....	680	725	480
23	.....	.....	.....	.....	.....	510	735	.....	.....	650	95	650
24	.....	.....	.....	.....	.....	715	735	.....	.....	685	355	700
25	.....	.....	.....	.....	.....	715	735	.....	.....	650	730	150
26	.....	.....	.....	.....	.....	725	730	.....	.....	232	740	700
27	.....	.....	.....	.....	.....	725	215	.....	.....	318	660	730
28	.....	.....	.....	.....	.....	725	510	.....	.....	735	735	200
29	.....	.....	.....	.....	.....	210	735	.....	.....	680	705	490
30	.....	.....	.....	.....	.....	505	735	.....	.....	680	100	740
31	.....	.....	.....	.....	.....	.....	735	.....	.....	685	.....	710

1914

1	680	250	120	675	634	670	91	690	710	700	210	700
2	710	700	640	685	627	670	660	195	740	745	665	720
3	700	720	646	670	147	660	660	655	700	685	670	690
4	160	730	642	675	627	660	660	650	710	180	680	680
5	560	710	616	235	658	660	655	665	720	185	675	685
6	680	100	634	680	645	650	660	700	730	185	650	140
7	670	100	616	695	658	175	665	695	730	185	690	680
8	665	360	237	685	645	675	635	700	720	185	.....	680
9	680	700	634	675	658	685	625	210	730	185	680	700
10	700	690	646	675	147	670	645	670	690	185	680	690
11	90	690	642	695	611	690	635	680	710	185	675	675
12	570	690	640	235	611	665	76	695	710	185	695	690
13	610	690	640	730	627	685	635	710	80	185	695	260
14	630	680	668	730	627	170	630	695	730	185	695	260
15	640	130	198	645	634	170	645	715	750	185	160	260
16	675	680	695	195	627	660	645	200	720	185	690	190
17	635	700	695	100	147	650	675	710	720	185	660	190
18	100	680	700	100	662	680	660	700	700	185	650	190
19	575	700	722	265	658	675	200	715	700	730	650	190
20	650	690	695	715	652	665	650	665	110	675	660	200
21	700	700	695	615	686	130	655	730	730	675	650	190
22	685	230	240	635	674	665	660	700	720	700	160	190
23	715	690	660	130	686	665	670	80	700	695	705	190
24	720	690	690	140	105	690	655	745	720	700	705	190
25	160	690	702	140	686	680	660	690	720	160	670	190
26	590	690	686	140	670	670	73	700	720	630	660	190
27	710	690	690	140	697	690	655	670	160	630	680	190
28	685	700	670	635	686	155	650	705	730	670	680	190
29	685	.....	237	595	680	155	665	675	730	680	160	190
30	690	.....	686	600	702	660	645	715	620	650	705	190
31	675	.....	695	.....	105	.....	665	680	.....	650	.....	190

* For 1915 records see page 327.

TABLE 73

STORAGE, OUTFLOW, AND INFLOW—LAKE OF THE WOODS

Date	1892					1893				
	Lake Level	Change in Storage: Feet Depth	Change in Storage: Rate c. f. s.	Outflow Rate c. f. s.	Inflow Rate c. f. s.	Lake Level	Change in Storage: Feet Depth	Change in Storage: Rate c. f. s.	Outflow Rate c. f. s.	Inflow Rate c. f. s.
Jan. 1-10										
11-20										
21-31										
Feb. 1-10										
11-20										
21-29										
Mar. 1-10										
11-20										
21-31										
Apr. 1-10										
11-20										
21-30										
May 1-10										
11-20										
21-31										
June 1-10										
11-20										
21-30										
July 1-10										
11-20										
21-31										
Aug. 1-10										
11-20										
21-31										
Sept. 1-10										
11-20										
21-30						1060.80				
Oct. 1-10						60.68	−0.12	— 5756	30780	25030
11-20						60.55	— .13	— 6229	29689	23460
21-31						60.40	— .15	— 6533	28327	21794
Nov. 1-10						60.24	— .16	— 7667	27002	19335
11-20						60.04	— .20	— 9583	25508	15925
21-30						59.76	— .28	—13417	24067	10650
Dec. 1-10						59.53	— .23	—11021	22642	11621
11-20						59.38	— .15	— 7187	21241	14054
21-31						59.17	— .21	— 9148	19960	10812

Date	1893					1894				
	Lake Level	Change in Storage: Feet Depth	Change in Storage: Rate c. f. s.	Outflow Rate c. f. s.	Inflow Rate c. f. s.	Lake Level	Change in Storage: Feet Depth	Change in Storage: Rate c. f. s.	Outflow Rate c. f. s.	Inflow Rate c. f. s.
Jan. 1-10	1058.94	−0.23	−11021	18648	7627	1057.22	−0.09	— 4312	10587	6275
11-20	58.74	— .20	— 9583	17578	7995	57.15	— .07	— 3354	10193	6839
21-31	58.58	— .16	— 6969	16482	9513	57.03	— .12	— 5227	9906	4679
Feb. 1-10	58.42	— .16	— 7667	15513	7846	56.94	— .09	— 4312	9700	5388
11-20	58.26	— .16	— 7667	14784	7117	56.84	— .10	— 4792	9144	4352
21-28	58.12	— .14	— 8385	14468	6083	56.77	— .07	— 4192	8798	4606
Mar. 1-10	57.98	— .14	— 6708	13811	7103	56.69	— .08	— 3833	8410	4577
11-20	57.86	— .12	— 5750	12725	6975	56.58	— .11	— 5271	8000	2729
21-31	57.77	— .09	— 3921	12580	8659	56.55	— .03	— 1307	7737	6430
Apr. 1-10	57.80	.03	1437	12557	13994	56.56	.01	479	7535	8014
11-20	57.84	.04	1917	12680	14597	56.84	.28	13417	7875	21292
21-30	57.95	.11	5271	12630	17901	57.66	.82	39291	9814	49105
May 1-10	58.44	.49	23479	13835	37314	58.33	.67	32104	13229	45333
11-20	59.12	.68	32583	17182	49765	58.93	.60	28750	16086	44836
21-31	59.40	.28	12197	19765	31962	59.40	.47	20473	18580	39053
June 1-10	59.62	.22	10542	21816	32358	59.76	.36	17250	20626	37876
11-20	59.84	.22	10542	23174	33716	60.15	.39	18687	23241	41928
21-30	60.04	.20	9583	24223	33806	60.35	.20	9583	25534	35117
July 1-10	60.19	.15	7187	24800	32077	60.45	.10	4792	26707	31499
11-20	60.27	.08	3833	25400	29233	60.46	.01	479	27308	27787
21-31	60.28	.01	436	25434	25870	60.30	— .16	— 6969	26974	20005
Aug. 1-10	60.17	— .11	— 5271	25134	19863	60.10	— .20	— 9583	26105	16522
11-20	59.98	— .19	— 9104	24314	15210	59.87	— .23	—11021	24948	13927
21-31	59.72	— .26	—11325	23501	12176	59.65	— .22	— 9583	23829	14246
Sept. 1-10	59.44	— .28	—13417	22236	8819	59.43	— .22	—10542	22577	12035
11-20	59.16	— .28	—13417	21054	7637	59.13	— .30	—14375	20993	6618
21-30	58.92	— .24	—11500	19727	8227	58.83	— .30	—14375	18550	4175
Oct. 1-10	58.70	— .22	—10542	18426	7884	58.65	— .18	— 8625	17306	8681
11-20	58.46	— .24	—11500	17348	5848	58.57	— .08	— 3833	17090	13257
21-31	58.21	— .25	—10890	16128	5238	58.43	— .14	— 6098	16470	10372
Nov. 1-10	57.97	— .24	—11500	15068	3568	58.28	— .15	— 7187	15982	8795
11-20	57.79	— .18	— 8625	13886	5261	58.15	— .13	— 6229	15288	9059
21-30	57.65	— .14	— 6708	12944	6236	58.00	— .15	— 7187	14270	7083
Dec. 1-10	57.54	— .11	— 5271	12308	7037	57.89	— .11	— 5271	12950	**7679**
11-20	57.44	— .10	— 4792	11818	7026	57.74	— .15	— 7187	11966	4779
21-31	57.31	— .13	— 5662	11191	5529	57.62	— .12	— 5227	11344	6117

Lake levels refer to elevations on the 1st, 11th and 21st of each month.

Inflow represents net available run-off from entire watershed, evaporation from lake having been cared for by method of computation used.

TABLE 73—Continued

STORAGE, OUTFLOW, AND INFLOW—LAKE OF THE WOODS

Date	1895 Lake Level	1895 Change in Storage Feet Depth	1895 Change in Storage Rate c. f. s.	1895 Outflow Rate c. f. s.	1895 Inflow Rate c. f. s.	1896 Lake Level	1896 Change in Storage Feet Depth	1896 Change in Storage Rate c. f. s.	1896 Outflow Rate c. f. s.	1896 Inflow Rate c. f. s.
Jan. 1-10	1057.50	−0.12	−5750	11195	5445	1057.35	−0.10	−4792	11528	6736
11-20	57.40	− .10	−4792	11033	6241	57.25	− .10	−4792	10989	6197
21-31	57.26	− .14	−6098	10826	4728	57.15	− .10	−4356	10525	6169
Feb. 1-10	57.15	− .11	−5271	10360	5089	57.05	− .10	−4792	9990	5198
11-20	57.08	− .07	−3354	9938	6584	56.95	− .10	−4792	9583	4791
21-28	57.02	− .06	−3594	9480	5886	56.87	− .08	−4259	9178	4919
Mar. 1-10	56.95	− .07	−3354	9048	5694	56.79	− .08	−3833	8744	4911
11-20	56.85	− .10	−4792	8954	4162	56.74	− .05	−2396	8482	6086
21-31	56.70	− .15	−6533	8827	2294	56.71	− .03	−1307	8238	6931
Apr. 1-10	56.70	0	0	8914	8914	57.01	.30	14375	8738	23113
11-20	56.80	.10	4792	9234	14026	57.65	.64	30666	10554	41220
21-30	57.00	.20	9583	9443	19026	58.26	.61	29229	13267	42496
May 1-10	57.30	.30	14375	10603	24978	58.96	.70	33541	16408	49949
11-20	57.40	.10	4792	11281	16073	59.80	.84	40249	20240	60489
21-31	57.50	.10	4356	11496	15852	60.77	.97	42253	25365	67618
June 1-10	58.02	.52	24916	12398	37314	61.45	.68	32583	30453	63036
11-20	58.56	.54	25875	15281	41156	61.91	.46	22041	33878	55919
21-30	58.90	.34	16292	17286	33578	62.12	.21	10062	36140	46202
July 1-10	59.10	.20	9583	18558	28141	62.14	.02	958	37410	38368
11-20	59.21	.11	5271	19542	24813	62.01	− .13	− 6229	37198	30969
21-31	59.27	.06	2613	20205	22818	61.85	− .16	− 6969	36247	29278
Aug. 1-10	59.25	− .02	− 958	20409	19451	61.68	− .17	− 8146	35456	27310
11-20	59.20	− .05	−2396	20128	17732	61.53	− .15	− 7187	35088	27901
21-31	59.05	− .15	−6533	19863	13330	61.33	− .20	− 8712	33693	24981
Sept. 1-10	58.90	− .15	−7187	19285	12098	61.10	− .23	−11021	32138	21117
11-20	58.75	− .15	−7187	18756	11569	60.85	− .25	−11979	30721	18742
21-30	58.59	− .16	−7667	18031	10364	60.60	− .25	−11979	29478	17499
Oct. 1-10	58.40	− .19	−9104	17306	8202	60.35	− .25	−11979	27996	16017
11-20	58.24	− .16	−7667	16495	8828	60.05	− .30	−14375	26203	11828
21-31	58.12	− .12	−5227	15832	10605	59.82	− .23	−10019	24321	14302
Nov. 1-10	58.00	− .12	−5750	15065	9315	59.71	− .11	− 5271	22898	17627
11-20	57.90	− .10	−4792	14477	9685	59.66	− .05	− 2396	22575	20179
21-30	57.80	− .10	−4792	13809	9017	59.55	− .11	− 5271	22150	16879
Dec. 1-10	57.69	− .11	−5271	13129	7858	59.45	− .10	− 4792	21840	17048
11-20	57.57	− .12	−5750	12617	6867	59.35	− .10	− 4792	21064	16272
21-31	57.45	− .12	−5227	11988	6761	59.19	− .16	− 6969	20285	13316

Date	1897 Lake Level	1897 Change in Storage Feet Depth	1897 Change in Storage Rate c. f. s.	1897 Outflow Rate c. f. s.	1897 Inflow Rate c. f. s.	1898 Lake Level	1898 Change in Storage Feet Depth	1898 Change in Storage Rate c. f. s.	1898 Outflow Rate c. f. s.	1898 Inflow Rate c. f. s.
Jan. 1-10	1059.05	−0.14	−6708	19335	12627	1058.42	−0.16	− 7667	17687	10020
11-20	58.92	− .13	−6229	18680	12451	58.28	− .14	− 6708	16738	10030
21-31	58.77	− .15	−6533	17878	11345	58.12	− .16	− 6969	15617	8648
Feb. 1-10	58.65	− .12	−5750	17220	11470	57.99	− .13	− 6229	14733	8504
11-20	58.50	− .15	−7187	16551	9364	57.85	− .14	− 6708	13881	7173
21-28	58.40	− .10	−5990	15845	9855	57.72	− .13	− 7786	13284	5498
Mar. 1-10	58.28	− .12	−5750	15333	9583	57.58	− .14	− 6708	12660	5952
11-20	58.18	− .10	−4792	14804	10012	57.41	− .17	− 8146	11965	3819
21-31	58.22	.04	1742	14616	16358	57.26	− .15	− 6533	11509	4976
Apr. 1-10	58.48	.26	12458	15160	27618	57.13	− .13	− 6229	11001	4772
11-20	59.34	.86	41207	17572	58779	57.05	− .08	− 3833	10915	7082
21-30	60.10	.76	36416	22413	58829	57.06	.01	479	11034	11513
May 1-10	60.48	.38	18208	25622	43830	57.07	.01	479	11066	11545
11-20	60.66	.18	8625	27281	35906	57.12	.05	2396	11279	13675
21-31	60.88	.22	9583	28582	38165	57.25	.13	5662	11305	16966
June 1-10	61.13	.25	11979	30047	42026	57.44	.19	9104	11530	20634
11-20	61.35	.22	10542	31321	41863	57.76	.32	15333	12110	27443
21-30	61.55	.20	9583	32705	42288	58.28	.52	24916	13752	38668
July 1-10	61.80	.25	11979	34015	45994	58.68	.40	19166	16158	35324
11-20	62.18	.38	18208	35972	54180	58.92	.24	11500	18287	29787
21-31	62.26	.08	3485	38146	41631	59.12	.20	8712	19121	27833
Aug. 1-10	62.10	− .16	− 7667	38170	30503	59.24	.12	5750	19988	25738
11-20	61.97	− .13	− 6229	37883	31654	59.32	.08	3833	20747	24580
21-31	61.81	− .16	− 6969	37050	30081	59.40	.08	3485	21354	24839
Sept. 1-10	61.60	− .21	−10062	35991	25929	59.46	.06	2875	22069	24944
11-20	61.38	− .22	−10542	34467	23925	59.53	.07	3354	22428	25782
21-30	61.08	− .30	−14375	32873	18498	59.62	.09	4312	22970	27282
Oct. 1-10	60.80	− .28	−13417	30949	17532	59.70	.08	3833	23129	26962
11-20	60.50	− .30	−14375	29097	14722	59.79	.09	4312	19289	23601
21-31	60.20	− .30	−13068	27064	13996	59.88	.09	3921	15789	19710
Nov. 1-10	59.90	− .30	−14375	25396	11021	59.95	.07	3354	16490	19844
11-20	59.65	− .25	−11979	23891	11912	60.05	.10	4792	18311	23103
21-30	59.38	− .27	−12937	22446	9509	60.19	.14	6708	10890	17598
Dec. 1-10	59.12	− .26	−12458	21195	8737	60.33	.14	6708	10890	17598
11-20	58.85	− .27	−12937	19919	6982	60.35	.02	958	13083	14041
21-31	58.58	− .27	−11761	18801	7040	60.35	00	00	14427	14427

Lake levels refer to elevations on the 1st, 11th and 21st of each month.

Inflow represents net available run-off from entire watershed, evaporation from lake having been cared for by method of computation used.

TABLE 73—Continued

STORAGE, OUTFLOW, AND INFLOW—LAKE OF THE WOODS

Date	1899					1900				
	Lake Level	Change in Storage		Outflow Rate c. f. s.	Inflow Rate c. f. s.	Lake Level	Change in Storage		Outflow Rate c. f. s.	Inflow Rate c. f. s.
		Feet Depth	Rate c. f. s.				Feet Depth	Rate c. f. s.		
Jan. 1-10	1060.34	−0.01	− 479	14460	13981	1060.64	−0.06	− 2875	18395	15520
11-20	60.31	.03	1437	14540	13103	60.55	− .09	− 4312	17933	13621
21-31	60.30	− .01	− 436	14475	14039	60.41	− .14	− 6098	17339	11241
Feb. 1-10	60.22	− .08	− 3833	14480	10647	60.23	− .18	− 8625	16869	8244
11-20	60.11	− .11	− 5271	14306	9035	60.04	− .19	− 9104	16249	7145
21-28	60.00	− .11	− 6589	14213	7624	59.88	− .16	− 9584	15816	6232
Mar. 1-10	59.89	− .11	− 5271	14006	8735	59.69	− .19	− 9104	15295	6191
11-20	59.81	− .08	− 3833	13652	9819	59.52	− .17	− 8146	14688	6542
21-31	59.71	− .10	− 4356	13377	9021	59.37	− .15	− 6533	14166	7633
Apr. 1-10	59.60	− .11	− 5271	12886	7615	59.36	− .01	− 479	11170	10691
11-20	59.54	− .06	− 2875	14433	11558	59.50	.14	6708	10019	16727
21-30	59.82	.28	13417	23881	37298	59.47	− .03	− 1437	9913	8476
May 1-10	60.32	.50	23958	22851	46809	59.40	− .07	− 3354	9908	6554
11-20	60.66	.34	16292	27200	43492	59.34	− .06	− 2875	9735	6860
21-31	60.85	.19	8276	30630	38906	59.27	− .07	− 3049	9763	6714
June 1-10	61.10	.25	11979	33063	45042	59.21	− .06	− 2875	9625	6750
11-20	61.41	.31	14854	34919	49773	59.15	− .06	− 2875	9662	6787
21-30	61.74	.33	15812	36615	52427	59.08	− .07	− 3354	9645	6291
July 1-10	62.05	.31	14854	37867	52721	59.01	− .07	− 3354	9540	6186
11-20	62.10	.05	2396	39222	41618	58.96	− .05	− 2396	9645	7249
21-31	62.10	0	0	39514	39514	58.89	− .07	− 3049	9482	6433
Aug. 1-10	62.02	− .08	− 3833	39310	35477	58.82	− .07	− 3354	9560	6206
11-20	61.90	− .12	− 5750	38544	32794	58.82	0	0	9455	9455
21-31	61.68	− .22	− 9583	37733	28159	59.11	.29	12633	9647	22280
Sept. 1-10	61.45	− .23	−11021	36445	25424	60.03	.92	44082	9999	54081
11-20	61.10	− .35	−16771	35110	18339	60.66	.63	30187	10877	41064
21-30	60.82	− .28	−13417	33024	19607	61.28	.62	29708	12781	42489
Oct. 1-10	60.91	.09	4312	20410	24722	61.61	.33	15812	16498	32310
11-20	60.99	.08	3833	12520	16353	61.82	.21	10062	32954	43016
21-31	61.00	.01	436	12434	12870	62.00	.18	7840	37364	45204
Nov. 1-10	61.00	0	0	12545	12545	62.27	.27	12937	38894	51831
11-20	61.00	0	0	12465	12465	62.37	.10	4792	39680	44472
21-30	61.00	0	0	12545	12545	62.35	− .02	− 958	40188	39230
Dec. 1-10	60.93	− .07	− 3354	12465	9111	62.26	− .09	− 4312	40220	35908
11-20	60.80	− .13	− 6229	17684	11455	62.16	− .10	− 4792	39963	35171
21-31	60.70	− .10	− 4356	18750	14394	62.03	− .13	− 5662	39135	33473

Date	1901					1902				
Jan 1-10	1061.87	−0.16	− 7667	37759	30092	1059.46	−0.09	− 4312	11070	6758
11-20	61.73	− .14	− 6708	36087	29379	59.37	− .09	− 4312	10909	6597
21-31	61.51	− .22	− 9583	34491	24908	59.29	− .08	− 3485	10897	7412
Feb. 1-10	61.28	− .23	−11021	32776	21755	59.23	− .06	− 2875	10693	7818
11-20	61.04	− .24	−11500	31285	19785	59.08	− .15	− 7187	10656	3469
21-28	60.81	− .23	−13776	29908	16132	59.02	− .06	− 3594	10499	6905
Mar. 1-10	60.53	− .28	−13417	28380	14963	59.00	− .02	− 958	10297	9339
11-20	60.16	− .37	−17729	26972	9243	59.02	.02	958	10350	11308
21-31	59.90	− .26	−11325	25289	13964	59.04	.02	871	10285	11156
Apr. 1-10	60.11	.21	10062	16580	26642	59.03	− .01	− 479	10350	9871
11-20	60.53	.42	20125	13070	33195	59.00	− .03	− 1437	10270	8833
21-30	61.00	.47	22521	12990	35511	59.20	.20	9583	10611	20194
May 1-10	60.96	− .04	− 1917	16669	14752	59.98	.78	37374	11242	48616
11-20	61.10	.14	6708	21897	28605	60.20	.22	10542	11584	22126
21-31	61.00	− .10	− 4356	26979	22623	60.50	.30	13068	11947	25015
June 1-10	61.05	.05	2396	27173	29569	60.60	.10	4792	16629	21421
11-20	61.15	.10	4792	27495	32287	60.72	.12	5750	29769	35519
21-30	61.24	.09	4312	27670	31982	60.64	− .08	− 3833	32726	28893
July 1-10	61.42	.18	8625	28375	37000	60.74	.10	4792	33272	38064
11-20	61.41	− .01	− 479	29055	28576	60.63	− .11	− 5271	33062	27791
21-31	61.13	− .28	−12197	28527	16330	60.70	.07	3049	23113	26162
Aug. 1-10	60.82	− .31	−14854	27597	12743	60.70	0	0	19665	19665
11-20	60.86	.04	1917	26184	28101	60.70	0	0	19724	19724
21-31	60.86	0	0	16344	16344	60.68	− .02	− 871	19447	18576
Sept. 1-10	60.75	− .11	− 5271	14470	9199	60.66	− .02	− 958	16112	15154
11-20	60.55	− .20	− 9583	14096	4513	60.64	− .02	− 958	14395	13437
21-30	60.40	− .15	− 7187	13469	6282	60.62	− .02	− 958	14290	13332
Oct. 1-10	60.38	− .02	− 958	13123	12165	60.60	− .02	− 958	14395	13437
11-20	60.26	− .12	− 5750	12551	6801	60.57	− .03	− 1437	14290	12853
21-31	60.11	− .15	− 6533	12184	5651	60.54	− .03	− 1307	14290	12983
Nov. 1-10	60.01	− .10	− 4792	11697	6905	60.50	− .04	− 1917	14225	12308
11-20	59.92	− .09	− 4312	11479	7167	60.45	− .05	− 2396	14305	11909
21-30	59.83	− .09	− 4312	11279	6967	60.41	− .04	− 1917	14179	12262
Dec. 1-10	59.75	− .08	− 3833	11180	7347	60.35	− .06	− 2875	14190	11315
11-20	59.65	− .10	− 4792	11213	6421	60.28	− .07	− 3354	14098	10744
21-31	59.55	− .10	− 4356	11056	6700	60.21	− .07	− 3049	14010	10961

Lake levels refer to elevations on the 1st, 11th and 21st of each month.

Inflow represents net available run-off from entire watershed, evaporation from lake having been cared for by method of computation used.

TABLE 73—Continued

STORAGE, OUTFLOW, AND INFLOW—LAKE OF THE WOODS

Date	1903 Lake Level	1903 Change in Storage. Feet Depth	1903 Change in Storage. Rate c. f. s.	1903 Outflow Rate c. f. s.	1903 Inflow Rate c. f. s.	1904 Lake Level	1904 Change in Storage Feet Depth	1904 Change in Storage Rate c. f. s.	1904 Outflow Rate c. f. s.	1904 Inflow Rate c. f. s.
Jan. 1-10	1060.14	−0.07	− 3354	14075	10721	1059.38	−0.13	−6229	13199	6970
11-20	60.07	− .07	− 3354	13891	10537	59.26	− .12	−5750	13180	7430
21-31	59.99	− .08	− 3485	13967	10482	59.12	− .14	−6098	13015	6917
Feb. 1-10	59.90	− .09	− 4312	13765	9453	59.01	− .11	−5271	13007	7736
11-20	59.81	− .09	− 4312	13742	9430	58.89	− .12	−5750	12965	7215
21-28	59.73	− .08	− 4791	13586	8795	58.80	− .09	−4791	12797	8006
Mar. 1-10	59.64	− .09	− 4312	13375	9063	58.70	− .10	−4792	12860	8068
11-20	59.57	− .07	− 3354	13268	9914	58.61	− .09	−4312	12780	8468
21-31	59.64	.07	3049	12986	16035	58.58	− .03	−1307	12867	11560
Apr. 1-10	60.01	.37	17729	12892	30621	58.54	− .04	−1917	12675	10758
11-20	60.45	.44	21083	13167	34250	58.60	.06	2875	12923	15798
21-30	60.81	.36	17250	14063	31313	58.94	.34	16292	13411	29703
May 1-10	61.09	.28	13417	21992	35409	59.41	.47	22521	14064	36585
11-20	61.28	.19	9104	32159	41263	59.72	.31	14854	14756	29610
21-31	61.40	.12	5227	33115	38342	59.92	.20	8712	15193	23905
June 1-10	61.37	− .03	− 1437	32537	31100	60.06	.14	6708	15786	22494
11-20	61.17	− .20	− 9583	31718	22135	60.21	.15	7187	16121	23308
21-30	60.96	− .21	−10062	30884	20822	60.40	.19	9104	16564	25668
July 1-10	60.80	− .16	− 7667	30292	22625	60.59	.19	9104	16698	25802
11-20	60.66	− .14	− 6708	29452	22744	60.63	.04	1917	16925	18842
21-31	60.53	− .13	− 5662	28641	22979	60.59	− .04	− 1742	16839	15097
Aug. 1-10	60.40	− .13	− 6229	26925	20696	60.48	− .11	− 5271	16925	11654
11-20	60.32	− .08	− 3833	16490	12657	60.38	− .10	− 4792	16858	12066
21-31	60.23	− .09	− 3921	15766	11845	60.24	− .14	− 6098	16606	10508
Sept. 1-10	60.13	− .10	− 4792	15483	10691	60.10	− .14	− 6708	16434	9726
11-20	60.07	− .06	− 2875	15052	12177	59.97	− .13	− 6229	16056	9827
21-30	60.07	0	0	14827	14827	59.81	− .16	− 7667	15811	8144
Oct. 1-10	60.11	.04	1917	14551	16468	59.66	− .15	− 7187	15315	8128
11-20	60.21	.10	4792	14198	18990	59.49	− .17	− 8146	14937	6791
21-31	60.30	.09	3921	14091	18012	59.32	− .17	− 7404	14217	6813
Nov. 1-10	60.18	− .12	− 5750	13834	8084	59.17	− .15	− 7187	19296	12109
11-20	60.02	− .16	− 7667	13753	6086	59.03	− .14	− 6708	13049	6341
21-30	59.90	− .12	− 5750	13551	7801	58.92	− .11	− 5271	12410	7139
Dec. 1-10	59.78	− .12	− 5750	13521	7771	58.80	− .12	− 5750	12065	6315
11-20	59.65	− .13	− 6229	13364	7135	58.73	− .07	− 3354	11775	8421
21-31	59.51	− .14	− 6098	13327	7229	58.64	− .09	− 3921	11742	7821

Date	1905 Lake Level	1905 Change in Storage Feet Depth	1905 Change in Storage Rate c. f. s.	1905 Outflow Rate c. f. s.	1905 Inflow Rate c. f. s.	1906 Lake Level	1906 Change in Storage Feet Depth	1906 Change in Storage Rate c. f. s.	1906 Outflow Rate c. f. s.	1906 Inflow Rate c. f. s.
Jan. 1-10	1058.60	−0.04	− 1917	11655	9738	1061.53	−0.07	− 3354	14882	11528
11-20	58.54	− .06	− 2875	11669	8794	61.48	− .05	− 2396	14798	12402
21-31	58.48	− .06	− 2613	11566	8953	61.43	− .05	− 2178	14682	12504
Feb. 1-10	58.44	− .04	− 1917	11545	9628	61.38	− .05	− 2396	14678	12282
11-20	58.39	− .05	− 2396	11370	8974	61.31	− .07	− 3354	14544	11190
21-28	58.34	− .05	− 2995	11430	8435	61.25	− .06	− 3594	14542	10948
Mar. 1-10	58.29	− .05	− 2396	11450	9054	61.13	− .12	− 5750	14522	8772
11-20	58.23	− .06	− 2875	11303	8428	60.98	− .15	− 7187	14424	7237
21-31	58.19	− .04	− 1742	11362	9620	60.74	− .24	−10454	14422	3968
Apr. 1-10	58.13	− .06	− 2875	11399	8524	60.73	− .01	− 479	14316	13837
11-20	58.10	− .03	− 1437	11650	10213	61.15	.42	20125	15095	35220
21-30	58.44	.34	16292	11735	28027	61.36	.21	10062	22718	32780
May 1-10	58.98	.54	25875	11972	37847	61.21	− .15	− 7187	30422	23235
11-20	59.45	.47	22521	12243	34764	61.00	− .21	−10062	30242	20180
21-31	59.61	.16	6969	12516	19485	61.03	.03	1307	28502	29809
June 1-10	59.87	.26	12458	13051	25509	61.13	.10	4792	26200	30992
11-20	60.27	.40	19166	13411	32577	61.20	.07	3354	24533	27887
21-30	60.78	.51	24437	14206	38643	61.26	.06	2875	23906	26781
July 1-10	61.26	.48	23000	15542	38542	61.27	.01	479	23465	23944
11-20	61.69	.43	20604	23984	44588	61.21	− .06	− 2875	23329	20454
21-31	61.97	.28	12197	31532	43729	61.07	− .14	− 6098	22970	16872
Aug. 1-10	62.08	.11	5271	35736	41007	60.93	− .14	− 6708	22714	16006
11-20	62.13	.05	2396	38443	40839	60.78	− .15	− 7187	22216	15029
21-31	62.10	− .03	− 1307	39148	37841	60.59	− .19	− 8276	21820	13544
Sept. 1-10	62.00	− .10	− 4792	38794	34002	60.41	− .18	− 8625	20883	12258
11-20	61.87	− .13	− 6229	37586	31337	60.25	− .16	− 7667	18487	10820
21-30	61.73	− .14	− 6708	34298	27590	60.10	− .15	− 7187	12219	5032
Oct. 1-10	61.57	− .16	− 7667	31769	24102	59.95	− .15	− 7187	12712	5525
11-20	61.43	− .14	− 6708	29060	22352	59.80	− .15	− 7187	15294	8107
21-31	61.40	− .03	− 1307	19047	17740	59.67	− .13	− 5662	14325	8663
Nov. 1-10	61.45	.05	2396	15302	17698	59.58	− .09	− 4312	13944	9632
11-20	61.52	.07	3354	15117	18471	59.50	− .08	− 3833	12492	8659
21-30	61.58	.06	2875	15077	17952	59.42	− .08	− 3833	12207	8374
Dec. 1-10	61.62	.04	1917	14904	16821	59.35	− .07	− 3354	11869	8515
11-20	61.64	.02	958	14882	15840	59.28	− .07	− 3354	11847	8493
21-31	61.60	.04	− 1742	14802	13060	59.20	− .08	− 3485	11620	8135

Lake levels refer to elevations on the 1st, 11th and 21st of each month.

Inflow represents net available run-off from entire watershed, evaporation from lake having been cared for by method of computation used.

TABLE 73—Continued

STORAGE, OUTFLOW, AND INFLOW—LAKE OF THE WOODS

Date	1907 Lake Level	1907 Change in Storage Feet Depth	1907 Change in Storage Rate c. f. s.	1907 Outflow Rate c. f. s.	1907 Inflow Rate c. f. s.	1908 Lake Level	1908 Change in Storage Feet Depth	1908 Change in Storage Rate c. f. s.	1908 Outflow Rate c. f. s.	1908 Inflow Rate c. f. s.
Jan. 1-10	1059.13	−0.07	−3354	11504	8150	1061.82	−0.10	−4792	18252	13460
11-20	59.04	− .09	−4312	11326	7014	61.73	− .09	−4312	18029	13717
21-31	58.97	− .07	−3049	11308	8259	61.63	− .10	−4356	18088	13732
Feb. 1-10	58.90	− .07	−3354	11107	7753	61.54	− .09	−4312	17819	13507
11-20	58.84	− .06	−2875	11086	8211	61.44	− .10	−4792	17846	13054
21-28	58.78	− .06	−3594	10956	7362	61.35	− .09	−4791	17799	13008
Mar. 1-10	58.72	− .06	−2875	10813	7938	61.21	− .14	−6708	17819	11111
11-20	58.67	− .05	−2396	10788	8392	61.04	− .17	−8146	18252	10106
21-31	58.61	− .06	−2613	10606	7993	60.90	− .14	−6098	18127	12029
Apr. 1-10	58.60	− .01	− 479	10617	10138	60.89	− .01	− 479	18252	17773
11-20	58.60	0	0	10617	10617	60.90	.01	479	18099	18578
21-30	58.62	.02	958	10552	11510	60.97	.07	3354	18406	21760
May 1-10	58.75	.13	6229	10700	16929	61.09	.12	5750	18758	24508
11-20	59.06	.31	14854	10950	25804	61.22	.13	6229	20467	26696
21-31	59.35	.29	12633	11323	23956	61.33	.11	4791	23554	28345
June 1-10	59.60	.25	11979	10647	22626	61.39	.06	2875	26354	29229
11-20	59.80	.20	9583	12559	22142	61.44	.05	2396	26820	29216
21-30	59.92	.12	5750	12932	18682	61.40	− .04	−1917	26745	24828
July 1-10	59.99	.07	3354	13206	16560	61.30	− .10	−4792	26626	21834
11-20	60.09	.10	4792	13030	17822	61.15	− .15	−7187	25682	18495
21-31	60.27	.18	7840	11483	19323	60.98	− .17	−7404	25345	17941
Aug. 1-10	60.52	.25	11979	11291	23270	60.80	− .18	−8625	24771	16146
11-20	60.73	.21	10062	12710	22772	60.61	− .19	−9104	24310	15206
21-31	60.93	.20	8712	14561	23273	60.58	− .03	−1307	23355	22048
Sept. 1-10	61.20	.27	12937	14919	27856	60.60	.02	958	20111	21069
11-20	61.58	.38	18208	15574	33782	60.53	− .07	−3354	17250	13896
21-30	61.92	.34	16292	17988	34280	60.40	− .13	−6229	17161	10932
Oct. 1-10	62.08	.16	7667	20049	27716	60.26	− .14	−6708	16864	10156
11-20	62.15	.07	3354	20386	23740	60.13	− .13	−6229	15041	8812
21-31	62.13	− .02	− 871	20681	19810	60.00	− .13	−5662	13391	7729
Nov. 1-10	62.11	− .02	− 958	20514	19556	59.90	− .10	−4792	12911	8119
11-20	62.09	− .02	− 958	20587	19629	59.86	− .04	−1917	12105	10188
21-30	62.07	− .02	− 958	20252	19294	59.85	− .01	− 479	10394	9915
Dec. 1-10	62.02	− .05	−2396	19479	17083	59.83	− .02	− 958	10475	9517
11-20	61.96	− .06	−2875	18866	15991	59.80	− .03	−1437	10214	8777
21-31	61.92	− .04	−1742	18280	16538	59.80	0	0	10307	10307

Date	1909 Lake Level	1909 Change in Storage Feet Depth	1909 Change in Storage Rate c. f. s.	1909 Outflow Rate c. f. s.	1909 Inflow Rate c. f. s.	1910 Lake Level	1910 Change in Storage Feet Depth	1910 Change in Storage Rate c. f. s.	1910 Outflow Rate c. f. s.	1910 Inflow Rate c. f. s.
Jan. 1-10	1059.75	−0.05	−2396	10116	7720	1060.61	0.05	2396	10587	12983
11-20	59.70	− .05	−2396	10273	7877	60.67	.06	2875	10783	13658
21-31	59.63	− .07	−3049	10060	7011	60.70	.03	1307	10630	11937
Feb. 1-10	59.52	− .11	−5271	10173	4902	60.70	0	0	10872	10872
11-20	59.43	− .09	−4312	10096	5784	60.72	.02	958	10684	11642
21-28	59.32	− .11	−6589	9850	3261	60.75	.03	1796	10825	12621
Mar. 1-10	59.20	− .12	−5750	10006	4256	60.78	.03	1437	10939	12376
11-20	59.14	− .06	−2875	9964	7089	60.85	.07	3354	11388	14742
21-31	59.09	− .05	−2178	9783	7605	61.13	.28	12197	12239	24436
Apr. 1-10	59.06	− .03	−1437	9880	8443	61.32	.19	9104	22586	31690
11-20	58.94	− .12	−5750	9670	3920	61.49	.17	8146	24154	32300
21-30	58.75	− .19	−9104	9880	776	61.54	.05	2396	26242	28638
May 1-10	58.92	.17	8146	9690	17836	61.43	− .11	− 5271	27430	22159
11-20	59.35	.43	20604	10026	30630	61.20	− .23	−11021	27248	16227
21-31	59.45	.10	4356	10295	14651	60.99	− .21	− 9148	26329	17181
June 1-10	59.43	− .02	− 958	10768	9810	60.79	− .20	− 9583	25416	15833
11-20	59.52	.09	4312	10620	14932	60.63	− .16	− 7667	20950	13283
21-30	59.72	.20	9583	10795	20378	60.42	− .21	−10062	20087	10025
July 1-10	59.80	.08	3833	10797	14630	60.16	− .26	−12458	18733	6275
11-20	59.85	.05	2396	10624	13020	59.93	− .23	−11021	13336	2315
21-31	59.90	.05	2178	10813	12991	59.69	− .24	−10454	11448	994
Aug. 1-10	59.95	.05	2396	10642	13038	59.50	− .19	− 9104	10794	1690
11-20	60.00	.05	2396	10806	13202	59.30	− .20	− 9583	10479	896
21-31	60.00	0	0	10770	10770	59.08	− .22	− 9583	10119	536
Sept. 1-10	60.00	0	0	10968	10968	58.94	− .14	− 6708	10092	3384
11-20	60.00	0	0	10705	10705	58.80	− .14	− 6708	9787	3079
21-30	60.00	0	0	10842	10842	58.67	− .13	− 6229	10024	3795
Oct. 1-10	60.06	.06	2875	10524	13399	58.52	− .15	− 7187	9816	2629
11-20	60.10	.04	1917	10693	12610	58.39	− .13	− 6229	9804	3575
21-31	60.12	.02	871	10475	11346	58.27	− .12	− 5227	8952	3725
Nov. 1-10	60.15	.03	1437	10678	12115	58.19	− .08	− 3833	8616	4783
11-20	60.19	.04	1917	10678	12595	58.13	− .06	− 2875	8332	5457
21-30	60.21	.02	958	10476	11434	58.07	− .06	− 2875	8496	5621
Dec. 1-10	60.30	.09	4312	10678	14990	58.00	− .07	− 3354	8488	5134
11-20	60.43	.13	6229	10476	16705	57.93	− .07	− 3354	8220	4866
21-31	60.56	.13	5662	10696	16358	57.86	− .07	− 3049	8427	5378

Lake levels refer to elevations on the 1st, 11th and 21st of each month.

Inflow represents net available run-off from entire watershed, evaporation from lake having been cared for by method of computation used.

* TABLE 73—Continued

STORAGE, OUTFLOW, AND INFLOW—LAKE OF THE WOODS

Date	1911 Lake Level	1911 Change in Storage Feet Depth	1911 Change in Storage Rate c. f. s.	1911 Outflow Rate c. f. s.	1911 Inflow Rate c. f. s.	1912 Lake Level	1912 Change in Storage Feet Depth	1912 Change in Storage Rate c. f. s.	1912 Outflow Rate c. f. s.	1912 Inflow Rate c. f. s.
Jan. 1-10	1057.79	—0.07	—3354	8206	4852	1057.08	0.05	2396	5300	7696
11-20	57.73	— .06	—2875	8333	5458	57.13	.05	2396	5281	7677
21-31	57.64	— .09	—3921	8164	4243	57.19	.06	2613	5055	7668
Feb. 1-10	57.56	— .08	—3833	8282	4449	57.22	.03	1437	5278	6715
11-20	57.48	— .08	—3833	8056	4223	57.25	.03	1437	5185	6622
21-28	57.40	— .08	—4791	8208	3417	57.26	.01	532	5503	6035
Mar. 1-10	57.32	— .08	—3833	8175	4342	57.30	.04	1917	5377	7294
11-20	57.23	— .09	—4312	7938	3626	57.32	.02	958	5643	6601
21-31	57.13	— .10	—4356	8143	3787	57.37	.05	2178	5484	7662
Apr. 1-10	57.05	— .08	—3833	7860	4027	57.38	.01	479	5732	6211
11-20	57.08	.03	1437	8204	9641	57.50	.12	5750	5851	11601
21-30	57.14	.06	2875	8076	10951	57.79	.29	13896	5807	19703
May 1-10	57.18	.04	1917	8317	10234	58.09	.30	14375	6282	20657
11-20	57.24	.06	2875	8317	11192	58.40	.31	14854	6248	21102
21-31	57.30	.06	2613	8135	10748	58.64	.24	10454	6078	16532
June 1-10	57.37	.07	3354	8323	11677	58.77	.13	6229	5498	11727
11-20	57.42	.05	2396	8186	10582	58.82	.05	2396	5394	7790
21-30	57.43	.01	479	8403	8882	58.86	.04	1917	5208	7125
July 1-10	57.33	— .10	—4792	8224	3432	58.98	.12	5750	4997	10747
11-20	57.17	— .16	—7667	8422	755	59.12	.14	6708	5082	11790
21-31	57.00	— .17	—7404	8260	856	59.30	.18	7840	5101	12941
Aug. 1-10	56.95	— .05	—2396	8449	6053	59.46	.16	7667	5393	13060
11-20	56.92	— .03	—1437	8206	6769	59.57	.11	5271	5473	10744
21-31	56.86	— .06	—2613	8035	5422	59.66	.09	3921	5770	9691
Sept. 1-10	56.85	— .01	— 479	7217	6738	59.80	.14	6708	5807	12515
11-20	56.84	— .01	— 479	7216	6737	60.10	.30	14375	5991	20366
21-30	56.87	.03	1437	6894	8331	60.47	.37	17729	6108	23837
Oct. 1-10	56.88	.01	479	6033	6512	60.69	.22	10542	7915	18457
11-20	56.91	.03	1437	5907	7344	60.78	.09	4312	9700	14012
21-31	56.92	.01	436	5379	5815	60.82	.04	1742	10241	11983
Nov. 1-10	56.91	— .01	— 479	5438	4959	60.80	— .02	— 958	9615	8657
11-20	56.90	— .01	— 479	5107	4628	60.78	— .02	— 958	9523	8565
21-30	56.92	.02	958	5294	6252	60.72	— .06	—2875	10134	7259
Dec. 1-10	56.95	.03	1437	5050	6487	60.65	— .07	—3354	10008	6654
11-20	56.97	.02	958	5285	6243	60.62	— .03	—1437	10219	8782
21-31	57.03	.06	2613	5093	7706	60.57	— .05	—2178	10000	7822

Date	1913 Lake Level	1913 Change in Storage Feet Depth	1913 Change in Storage Rate c. f. s.	1913 Outflow Rate c. f. s.	1913 Inflow Rate c. f. s.	1914 Lake Level	1914 Change in Storage Feet Depth	1914 Change in Storage Rate c. f. s.	1914 Outflow Rate c. f. s.	1914 Inflow Rate c. f. s.
Jan. 1-10	1060.50	— .07	— 3354	10130	6776	1060.09	0	0	7940	7940
11-20	60.46	— .04	— 1917	9915	7998	60.09	0	0	7724	7724
21-31	60.41	— .05	— 2178	10150	7972	60.09	0	0	7725	7725
Feb. 1-10	60.40	— .01	— 479	9959	9480	60.09	0	0	7662	7662
11-20	60.37	— .03	— 1437	8215	6778	60.09	0	0	7977	7977
21-28	60.38	.01	599	6989	7588	60.08	—0.01	— 599	9221	8622
Mar. 1-10	60.40	.02	958	6798	7756	60.02	— .06	—2875	9847	6972
11-20	60.43	.03	1437	7014	8451	59.98	— .04	—1917	10241	8324
21-31	60.48	.05	2178	6626	8804	59.93	— .05	—2178	9985	7807
Apr. 1-10	60.60	.12	5750	6457	12207	59.93	0	0	9977	9977
11-20	60.86	.26	12458	6583	19041	60.03	.10	4792	9694	14486
21-30	61.06	.20	9583	12762	22345	60.27	.24	11500	9985	21485
May 1-10	61.13	.07	3354	15353	18707	60.57	.30	14375	10481	24856
11-20	61.14	.01	479	17421	17900	60.78	.21	10062	11243	21305
21-31	61.09	— .05	— 2178	19220	17042	60.97	.19	8276	14991	23267
June 1-10	61.02	— .07	— 3354	19678	16324	61.27	.30	14375	17361	31736
11-20	60.93	— .09	— 4312	19916	15604	61.38	.11	5271	18397	23668
21-30	60.80	— .13	— 6229	19261	13032	61.21	— .17	—8146	19387	11241
July 1-10	60.86	.06	2875	17708	20583	61.20	— .01	— 479	19689	19210
11-20	61.00	.14	6708	12889	19597	61.20	0	0	20385	20385
21-31	60.99	— .01	— 436	14647	14211	61.06	— .14	—6098	20378	14280
Aug. 1-10	60.88	— .11	— 5271	15282	10011	60.75	— .31	—14854	19393	4539
11-20	60.80	— .08	— 3833	15241	11408	60.50	— .25	—11979	18716	6737
21-31	60.66	— .14	— 6098	14376	8278	60.35	— .15	— 6533	16068	9535
Sept. 1-10	60.40	— .26	—12458	14108	1650	60.31	— .04	— 1917	13016	11099
11-20	60.15	— .25	—11979	14108	2129	60.51	.20	9583	12840	22423
21-30	60.07	— .08	— 3833	10023	6190	60.46	— .05	— 2396	13066	10670
Oct. 1-10	60.13	.06	2875	8178	11053	60.51	.05	2396	12852	15248
11-20	60.17	.04	1917	7774	9691	60.65	.14	6708	11179	17887
21-31	60.14	— .03	— 1307	8025	6718	60.72	.07	3049	9745	12794
Nov. 1-10	60.15	.01	479	7812	8291	60.73	.01	479	9402	9881
11-20	60.14	— .01	— 479	8008	7529	60.70	— .03	— 1437	9742	8305
21-30	60.12	— .02	— 958	7829	6871	60.78	.08	3833	9614	13447
Dec. 1-10	60.12	0	0	7972	7972	60.80	.02	958	9796	10754
11-20	60.11	— .01	— 479	7956	7477	60.80	0	0	9550	9550
21-31	60.09	— .02	— 871	7557	6686	60.80	0	0	9574	9574

Lake levels refer to elevations on the 1st, 11th and 21st of each month.
Inflow represents net available run-off from entire watershed, evaporation from lake having been cared for by method of computation used.
* For 1915 records see page 328.

TABLE 74

SUMMARY OF LAKE LEVELS, OUTFLOW AND INFLOW—LAKE OF THE WOODS

WATERSHED AREA 26,750 SQUARE MILES

Date	Lake Levels						Outflow		Inflow	
	Actual Controlled Level			Computed Natural Level			Actual Controlled Outflow Av. c. f. s.	Computed Natural Outflow Av. c. f. s.	Actual Inflow Av. c. f. s.	Inches Depth on Drainage Area
	Mean for Month	Change in Level		Mean for Month	Change in Level					
		Rise Feet	Fall Feet		Rise Feet	Fall Feet				
1892										
Oct.	1060.61		.40			.20	29558		23375	1.01
Nov.	60.17		.64			.58	25525		15303	.64
Dec.	59.46		.59			.61	21238		12119	.52
Annual										2.17
1893										
Jan.	1058.85		.59	1057.76		.66	17534	18900	8415	.36
Feb.	58.34		.46	57.15		.57	14954	16760	7082	.28
Mar.	57.93		.35	56.62		.49	13024	15120	7614	.33
Apr.	57.83	.18		56.39	.06		12622	14460	15497	.65
May	58.75	1.45		57.23	1.45		17019	17020	39431	1.70
June	59.73	.64		58.29	.76		23071	20980	33292	1.39
July	60.21	.24		58.88	.34		25247	23600	28957	1.25
Aug.	60.05		.56	58.80		.50	24290	23220	15634	.67
Sept.	59.31		.80	58.11		.75	21005	20250	8228	.34
Oct.	58.58		.71	57.40		.73	17263	17590	6288	.27
Nov.	57.90		.56	56.67		.65	13966	15260	5022	.21
Dec.	57.49		.34	56.13		.49	11753	13740	6498	.28
Annual	1058.75			1057.45			17668	18090	15226	7.73
1894										
Jan.	1057.18		.28	1055.66		.46	10218	12510	5891	.25
Feb.	56.89		.26	55.20		.42	9244	11370	4795	.19
Mar.	56.64		.22	54.78		.40	8039	10380	4638	.20
Apr.	56.84	1.11		54.83	1.06		8408	10490	26137	1.09
May	58.60	1.74		56.64	1.84		16049	15180	42944	1.85
June	59.93	.95		58.10	1.12		23134	20210	38307	1.60
July	60.41		.05	58.80	.19		26995	23220	26223	1.13
Aug.	59.98		.65	58.57		.49	24924	22180	14877	.64
Sept.	59.27		.82	57.98		.76	20707	19740	7609	.32
Oct.	58.62		.40	57.34		.42	16940	17390	10757	.46
Nov.	58.22		.43	56.90		.49	15180	15950	8312	.35
Dec.	57.81		.38	56.38		.56	12062	14430	6189	.27
Annual	1058.37			1056.76			16038	16121	16445	8.35
1895										
Jan.	1057.45		.36	1055.83		.52	11012	12950	5447	.23
Feb.	57.12		.24	55.36		.37	9958	11750	5851	.23
Mar.	56.89		.32	54.99		.47	8939	10870	3993	.17
Apr.	56.78	.30		54.78	.25		9197	10380	13989	.58
May	57.32	.50		55.30	.51		11139	11610	18867	.81
June	58.26	1.40		56.30	1.51		14988	14210	37349	1.56
July	59.13	.37		57.30	.52		19460	17250	25179	1.08
Aug.	59.20		.22	57.53		.07	20125	18050	16725	.72
Sept.	58.82		.46	57.28		.36	18691	17180	11344	.47
Oct.	58.33		.47	56.85		.43	16521	15800	9257	.40
Nov.	57.95		.32	56.48		.35	14450	14710	9339	.39
Dec.	57.63		.35	56.10		.43	12559	13660	7149	.31
Annual	1057.91			1056.18			13948	14053	13725	6.95
1896										
Jan.	1057.30		.30	1055.67		.42	10998	12530	6361	.27
Feb.	57.00		.28	55.24		.43	9598	11470	4971	.20
Mar.	56.77		.16	54.86		.31	8480	10560	6007	.26
Apr.	57.38	1.55		55.39	1.59		10853	11830	35610	1.49
May	59.43	2.51		57.55	2.69		20822	18120	59619	2.57
June	61.60	1.35		59.96	1.61		33490	29330	55052	2.30
July	62.05		.27	60.65		.04	36929	33560	32756	1.41
Aug.	61.60		.52	60.41		.34	34712	32060	26674	1.15
Sept.	60.97		.73	59.93		.62	30779	29160	19119	.80
Oct.	60.21		.78	59.25		.73	26113	25440	14057	.61
Nov.	59.69		.27	58.74		.28	22541	22940	18228	.76
Dec.	59.39		.36	58.43		.38	21038	21570	15473	.67
Annual	1059.45			1058.01			22241	21583	24519	12.49

TABLE 74—Continued

SUMMARY OF LAKE LEVELS, OUTFLOW AND INFLOW -LAKE OF THE WOODS

WATERSHED AREA 26,750 SQUARE MILES

Date	Lake Levels						Outflow		Inflow	
	Actual Controlled Level			Computed Natural Level			Actual Controlled Outflow Av. c. f. s.	Computed Natural Outflow Av. c. f. s.	Actual Inflow Av. c. f. s.	Inches Depth on Drainage Area
	Mean for Month	Change in Level		Mean for Month	Change in Level					
		Rise Feet	Fall Feet		Rise Feet	Fall Feet				
1897										
Jan.	1058.98	.....	.42	1057.98	.....	.49	18607	19740	12115	.52
Feb.	58.58	.....	.37	57.49	.....	.45	16588	17900	10256	.40
Mar.	58.26	.....	.18	57.09	.....	.28	14908	16560	12125	.52
Apr.	58.99	1.88	.....	57.74	1.84	.....	18382	18820	48409	2.02
May.	60.54	.78	.....	59.31	.85	.....	27207	25750	39264	1.69
June.	61.23	.67	.....	60.08	.74	.....	31358	30040	42059	1.76
July.	61.96	.71	.....	60.87	.77	.....	36112	34970	47086	2.03
Aug.	62.04	.....	.45	61.02	.....	.35	37680	35970	30725	1.32
Sept.	61.48	.....	.73	60.56	.....	.64	34444	32990	22784	.95
Oct.	60.65	.....	.88	59.82	.....	.79	28973	28520	15371	.66
Nov.	59.78	.....	.82	59.00	.....	.83	23910	24190	10814	.45
Dec.	58.98	.....	.80	58.18	.....	.83	19934	20530	7569	.33
Annual	1060.12	.....	.....	1059.09	.....	.....	25735	25550	24934	12.65
1898										
Jan.	1058.35	.....	.46	1057.50	.....	.53	16647	17940	9536	.41
Feb.	57.92	.....	.40	56.96	.....	.53	14014	16140	7170	.28
Mar.	57.49	.....	.46	56.39	.....	.63	12028	14460	4918	.21
Apr.	57.11	.....	.20	55.84	.....	.34	10983	12970	7789	.32
May.	57.12	.19	.....	55.74	.10	.....	11219	12710	14156	.61
June.	57.66	1.03	.....	56.20	.97	.....	12464	13930	28915	1.20
July.	58.77	.84	.....	57.30	.88	.....	17896	17250	30880	1.33
Aug.	59.27	.28	.....	57.87	.37	.....	20717	19310	25045	1.08
Sept.	59.50	.22	.....	58.21	.34	.....	22489	20650	26003	1.08
Oct.	59.75	.26	.....	58.49	.08	.....	19285	21830	23305	1.00
Nov.	60.01	.31	.....	58.44	.....	.09	15230	21610	20182	.84
Dec.	60.32	.16	.....	58.23	.....	.34	12853	20730	15325	.66
Annual	1058.61	.....	.....	1057.26	.....	.....	15500	17474	17823	9.02
1899										
Jan.	1060.33	.....	.05	1057.86	.....	.36	14491	19280	13718	.59
Feb.	60.16	.....	.30	57.43	.....	.50	14341	17690	9208	.36
Mar.	59.85	.....	.29	56.96	.....	.44	13669	16140	9186	.39
Apr.	59.64	.11	.....	56.65	.23	.....	17066	15210	18824	.78
May.	60.44	1.03	.....	57.81	1.54	.....	27014	19080	42935	1.85
June.	61.27	.89	.....	59.23	1.48	.....	34865	25340	49081	2.05
July.	62.02	.36	.....	60.49	.78	.....	38888	32560	44453	1.92
Aug.	61.94	.....	.42	60.75	.....	.14	38503	34190	32012	1.38
Sept.	61.27	.....	.86	60.33	.....	.65	34859	31570	21123	.88
Oct.	60.94	.18	.....	59.73	.....	.66	15035	28010	17817	.77
Nov.	61.00	.00	.....	58.95	.....	.71	12518	23950	12518	.52
Dec.	60.86	.....	.30	58.28	.....	.58	16379	20940	11742	.51
Annual	1060.81	.....	.....	1058.71	.....	.....	23189	23708	23649	12.00
1900										
Jan.	1060.58	.....	.29	1057.87	.....	.38	17871	19310	13389	.58
Feb.	60.14	.....	.53	57.35	.....	.59	16347	17420	7277	.28
Mar.	59.61	.....	.51	56.76	.....	.58	14699	15530	6816	.29
Apr.	59.43	.10	.....	56.42	.....	.16	10367	14550	11965	.50
May.	59.37	.....	.20	56.09	.....	.46	9801	13630	6709	.29
June.	59.18	.....	.19	55.66	.....	.39	9644	12510	6609	.27
July.	58.99	.....	.19	55.29	.....	.35	9553	11590	6617	.29
Aug.	58.88	.22	.....	55.06	.14	.....	9557	11030	12958	.56
Sept.	60.30	2.17	.....	56.40	2.04	.....	11219	14490	45878	1.91
Oct.	61.69	.72	.....	57.89	1.35	.....	29210	19390	40339	1.74
Nov.	62.27	.35	.....	59.36	1.20	.....	39587	26010	45178	1.88
Dec.	62.20	.....	.32	60.03	.31	.....	39752	29750	34806	1.50
Annual	1060.22	.....	.....	1057.02	.....	.....	18153	17100	19899	10.09

TABLE 74—Continued

SUMMARY OF LAKE LEVELS, OUTFLOW AND INFLOW—LAKE OF THE WOODS

WATERSHED AREA 26,750 SQUARE MILES

Date	Lake Levels						Outflow		Inflow	
	Actual Controlled Level			Computed Natural Level			Actual Controlled Outflow Av. c. f. s.	Computed Natural Outflow Av. c. f. s.	Actual Inflow Av. c. f. s.	Inches Depth on Drainage Area
	Mean for Month	Change in Level		Mean for Month	Change in Level					
		Rise Feet	Fall Feet		Rise Feet	Fall Feet				
1901										
Jan.	1061.79		.52	1060.12		.15	36060	30280	28023	1.21
Feb.	61.16		.70	59.76		.51	31424	28180	19445	.76
Mar.	60.35		.91	59.11		.77	26829	24740	12763	.55
Apr.	60.36	1.10		58.92	.49		14213	23800	31783	1.32
May	61.02	.00		59.08		.16	22014	24590	22014	.95
June	61.11	.24		59.24	.37		27446	25390	31279	1.30
July	61.34		.11	59.58		.01	28648	27180	26948	1.16
Aug.	60.89		.27	59.19		.41	23148	25140	18975	.82
Sept.	60.64		.46	58.52		.97	14012	21960	6665	.28
Oct.	60.30		.29	57.73		.70	12605	18790	8123	.35
Nov.	59.97		.28	57.04		.59	11485	16400	7013	.29
Dec.	59.70		.28	56.49		.53	11147	14740	6819	.29
Annual	1060.72			1058.73			21558	23410	18302	9.28
1902										
Jan.	1059.42		.26	1056.00		.43	10957	13395	6938	.30
Feb.	59.16		.27	55.58		.40	10624	12300	6004	.23
Mar.	59.02	.02		55.33		.08	10310	11680	10619	.46
Apr.	59.05	.16		55.28	.09		10410	11560	12966	.54
May	60.01	1.30		56.18	1.20		11602	13880	31696	1.37
June	60.63	.14		56.95	.78		26375	16110	28611	1.19
July	60.68	.06		57.83	.73		29600	19160	30527	1.32
Aug.	60.70		.02	58.09		.05	19607	20170	19298	.83
Sept.	60.65		.06	57.90		.34	14932	19430	13974	.58
Oct.	60.58		.08	57.56		.32	14324	18160	13087	.56
Nov.	60.48		.13	57.24		.31	14236	17050	12160	.51
Dec.	60.31		.20	56.93		.32	14096	16050	11005	.47
Annual	1060.06			1056.74			15620	15771	16487	8.36
1903										
Jan.	1060.10		.22	1056.62		.30	13978	15120	10577	.46
Feb.	59.86		.26	56.31		.30	13706	14240	9257	.36
Mar.	59.63		.09	56.06		.11	13203	13550	11811	.51
Apr.	60.23	1.17		56.62	1.09		13374	15120	32061	1.34
May	61.16	.59		57.77	1.26		29219	18930	38338	1.65
June	61.24		.44	58.56	.16		31713	22130	24686	1.03
July	60.74		.43	58.58	.03		29435	22220	22789	.98
Aug.	60.37		.30	58.44		.43	19599	21610	14962	.64
Sept.	60.12		.16	57.91		.44	15121	19470	12565	.52
Oct.	60.17	.23		57.69		.05	14274	18640	17829	.77
Nov.	60.10		.40	57.35		.64	13713	17420	7324	.31
Dec.	59.71		.39	56.77		.51	13402	15560	7374	.32
Annual	1060.29			1057.39			18432	17856	17513	8.89
1904										
Jan.	1059.32		.39	1056.29		.49	13127	14180	7100	.31
Feb.	58.95		.32	55.86		.34	12927	13030	7640	.31
Mar.	58.67		.22	55.57		.19	12837	12270	9436	.41
Apr.	58.63	.36		55.59	.42		13003	12330	18753	.78
May	59.52	.98		56.52	.99		14688	14830	29836	1.29
June	60.14	.48		57.13	.45		16157	16690	23823	1.00
July	60.57	.19		57.51	.12		16821	17980	19758	.85
Aug.	60.43		.35	57.31		.37	16790	17280	11380	.49
Sept.	60.03		.43	56.91		.43	16100	15980	9232	.39
Oct.	59.57		.49	56.45		.50	14803	14630	7230	.31
Nov.	59.11		.40	56.05		.33	14918	13530	8530	.36
Dec.	58.77		.28	55.68		.34	11857	12560	7529	.32
Annual	1059.48			1056.41			14505	14616	13366	6.82

TABLE 74—Continued

SUMMARY OF LAKE LEVELS, OUTFLOW AND INFLOW—LAKE OF THE WOODS

WATERSHED AREA 26,750 SQUARE MILES

Date	Lake Levels						Outflow		Inflow	
	Actual Controlled Level			Computed Natural Level			Actual Controlled Outflow Av. c. f. s.	Computed Natural Outflow Av. c. f. s.	Actual Inflow Av. c. f. s.	Inches Depth on Drainage Area
	Mean for Month	Change in Level		Mean for Month	Change in Level					
		Rise Feet	Fall Feet		Rise Feet	Fall Feet				
1905										
Jan.	1058.57	.....	.16	1055.43	.....	.19	11628	11930	9155	.39
Feb.	58.41	.....	.14	55.26	.....	.15	11450	11510	9054	.35
Mar.	58.26	.....	.15	55.10	.....	.14	11372	11130	9053	.39
Apr.	58.18	.25	.....	55.06	.32	.....	11594	11030	15588	.65
May.	59.15	1.17	.....	56.07	1.12	.....	12252	13580	30337	1.31
June.	60.11	1.17	.....	56.91	1.02	.....	13556	15980	32243	1.34
July.	61.44	1.19	.....	58.18	1.40	.....	23939	20530	42333	1.82
Aug.	62.08	.13	.....	59.38	.89	.....	37820	26120	39829	1.72
Sept.	61.93	.....	.37	59.90	.13	.....	36886	28980	30976	1.29
Oct.	61.52	.....	.33	59.74	.....	.44	26381	28060	21280	.92
Nov.	61.49	.18	.....	59.24	.....	.46	15165	25390	18040	.75
Dec.	61.62	.02	.....	58.78	.....	.52	14861	23130	15170	.65
Annual.	1060.23	.....	.....	57.42	.....	.....	18966	18993	22851	11.58
1906										
Jan.	1061.51	.....	.17	1058.21	.....	.55	14784	20650	12156	.52
Feb.	61.34	.....	.18	57.73	.....	.42	14591	18790	11511	.45
Mar.	61.04	.....	.51	57.22	.....	.67	14454	16990	6572	.28
Apr.	60.98	.62	.....	57.08	.68	.....	17376	16530	27279	1.14
May.	61.14	.....	.33	57.68	.38	.....	29683	18600	24582	1.06
June.	61.16	.23	.....	58.20	.49	.....	24879	20610	28553	1.19
July.	61.22	.....	.19	58.42	.....	.07	23245	21530	20309	.87
Aug.	60.85	.....	.48	58.18	.....	.36	22236	20530	14817	.64
Sept.	60.34	.....	.49	57.73	.....	.58	17196	18790	9370	.39
Oct.	59.88	.....	.43	57.09	.....	.58	14118	16560	7471	.32
Nov.	59.54	.....	.25	56.63	.....	.40	12881	15150	8888	.37
Dec.	59.31	.....	.22	56.24	.....	.37	11773	14040	8373	.36
Annual.	1060.69	.....	.....	1057.53	.....	.....	18130	18231	14980	7.59
1907										
Jan.	1059.09	.....	.23	1055.87	.....	.35	11377	13050	7822	.34
Feb.	58.87	.....	.19	55.55	.....	.28	11057	12230	7804	.30
Mar.	58.70	.....	.17	55.30	.....	.24	10732	11610	8104	.35
Apr.	58.61	.01	.....	55.15	.....	.03	10595	11250	10755	.45
May.	58.93	.73	.....	55.45	.71	.....	11001	11980	22285	.96
June.	59.68	.57	.....	56.13	.48	.....	12046	13740	21150	.88
July.	60.06	.35	.....	56.43	.22	.....	12538	14570	17947	.77
Aug.	60.62	.66	.....	56.80	.49	.....	12909	15650	23110	1.00
Sept.	61.40	.99	.....	57.47	.89	.....	16160	17840	31973	1.33
Oct.	62.09	.21	.....	58.11	.22	.....	20381	20250	23628	1.02
Nov.	62.10	.....	.06	58.14	.....	.05	20451	20370	19493	.81
Dec.	61.99	.....	.15	58.01	.....	.21	18856	19860	16537	.71
Annual.	1060.18	.....	.....	56.53	.....	.....	14024	15218	17595	8.92
1908										
Jan.	1061.78	.....	.29	1057.73	.....	.33	18122	18790	13639	.59
Feb.	61.49	.....	.28	57.43	.....	.27	17822	17690	13196	.53
Mar.	61.13	.....	.45	57.11	.....	.36	18068	16620	11112	.48
Apr.	60.91	.07	.....	57.02	.20	.....	18252	16330	19370	.81
May.	61.15	.36	.....	57.41	.58	.....	21011	17620	26575	1.14
June.	61.40	.07	.....	58.00	.49	.....	26640	19820	27757	1.16
July.	61.21	.....	.42	58.19	.....	.09	25867	20570	19375	.84
Aug.	60.73	.....	.40	58.01	.....	.13	24120	19860	17937	.77
Sept.	60.54	.....	.18	57.93	.....	.26	18174	19550	15299	.64
Oct.	60.20	.....	.40	57.45	.....	.57	15043	17770	8861	.38
Nov.	59.90	.....	.15	56.94	.....	.41	11803	16080	9407	.39
Dec.	59.82	.....	.05	56.57	.....	.35	10331	14970	9559	.41
Annual.	1060.86	.....	.....	1057.48	.....	.....	18777	17974	16001	8.14

TABLE 74—Continued

SUMMARY OF LAKE LEVELS, OUTFLOW AND INFLOW—LAKE OF THE WOODS

WATERSHED AREA 26,750 SQUARE MILES

Date	Lake Levels.						Outflow		Inflow		
	Actual Controlled Level			Computed Natural Level			Actual Controlled Outflow Av. c. f. s.	Computed Natural Outflow Av. c. f. s.	Actual Inflow Av. c. f. s.	Inches Depth on Drainage Area	Computed Natural Inflow Av. c. f. s.
	Mean for Month	Change in Level		Mean for Month	Change in Level						
		Rise Feet	Fall Feet		Rise Feet	Fall Feet					
1909											
Jan.	1059.72	.....	.17	1056.19	.....	.42	10147	13900	7519	.32	.....
Feb.	59.48	.....	.31	55.73	.....	.49	10053	12690	4748	.19	.....
*Mar.	59.18	.....	.23	55.27	.....	.40	9913	11540	6358	.27	5615
Apr.	58.97	.....	.34	54.94	.....	.37	9810	10750	4380	.18	5262
May.	59.12	.70	.....	55.21	.97	.....	10013	11390	20833	.90	25310
June.	59.51	.27	.....	55.81	.34	.....	10728	12900	15040	.63	17971
July.	59.82	.18	.....	56.07	.06	.....	10747	13580	13529	.58	14414
Aug.	59.97	.10	.....	56.10	.....	.01	10740	13660	12286	.53	13327
Sept.	60.00	.00	.....	56.06	.....	.02	10838	13550	10838	.45	13190
Oct.	60.07	.12	.....	56.06	.01	.....	10561	13550	12416	.54	13773
Nov.	60.17	.09	.....	56.15	.17	.....	10611	13800	12048	.50	16293
Dec.	60.37	.35	.....	56.31	.13	.....	10619	14240	16029	.69	16073
Annual..	1059.70	.....	.....	1055.83	.....	.....	10400	12967	11398	5.78	14135
1910											
Jan.	1060.64	.14	.....	1056.31	.....	.15	10665	14240	12829	.55	12245
Feb.	60.72	.05	.....	56.10	.....	.22	10791	13660	11647	.45	10157
Mar.	60.86	.38	.....	55.97	.12	.....	11545	13320	17419	.75	15004
Apr.	61.38	.41	.....	56.61	.93	.....	24327	15090	30876	1.29	29699
May.	61.30	.....	.55	57.14	.13	.....	26980	16720	18479	.80	18672
June.	60.71	.....	.57	57.10	.....	.25	22151	16590	13047	.54	12564
July.	60.05	.....	.73	56.60	.....	.72	14407	15060	3124	.13	4276
Aug.	59.40	.....	.61	55.84	.....	.76	10453	12970	1024	.04	1761
Sept.	58.87	.....	.41	55.18	.....	.54	9967	11320	3419	.14	3197
Oct.	58.46	.....	.40	54.63	.....	.58	9505	10040	3323	.14	1717
Nov.	58.16	.....	.20	54.12	.....	.41	8481	8950	5287	.22	2946
Dec.	57.97	.....	.21	53.77	.....	.29	8380	8220	5134	.22	4080
Annual..	1059.88	.....	.....	1055.78	.....	.....	13972	13012	10428	5.27	9663
1911											
Jan.	1057.76	.....	.22	1053.53	.....	.21	8232	7780	4831	.21	4782
Feb.	57.52	.....	.24	53.32	.....	.21	8180	7400	4073	.16	4126
Mar.	57.27	.....	.27	53.10	.....	.23	8087	7015	3914	.17	3717
Apr.	57.09	.01	.....	52.98	.10	.....	8047	6820	8206	.34	8353
May.	57.21	.16	.....	53.19	.21	.....	8252	7170	10725	.46	10010
June.	57.39	.13	.....	53.40	.22	.....	8304	7545	10380	.43	10737
July.	57.24	.....	.43	53.44	.....	.21	8301	7620	1654	.07	4906
Aug.	56.93	.....	.14	53.31	.....	.00	8224	7380	6060	.26	7343
Sept.	56.85	.01	.....	53.31	.04	.....	7109	7380	7269	.30	8056
Oct.	56.90	.05	.....	53.34	.....	.02	5760	7440	6533	.28	7278
Nov.	56.91	.00	.....	53.25	.....	.14	5280	7270	5280	.22	5301
Dec.	56.97	.11	.....	53.14	.....	.06	5141	7080	6841	.29	6299
Annual..	1057.17	.....	.....	1053.28	.....	.....	7406	7325	6316	3.19	6749
1912											
Jan.	1057.11	.16	.....	1053.10	.....	.04	5207	7015	7680	.33	6530
Feb.	57.23	.07	.....	53.03	.....	.10	5316	6900	6472	.26	5436
Mar.	57.31	.11	.....	52.95	.....	.06	5501	6770	7201	.31	5830
Apr.	57.49	.42	.....	52.97	.29	.....	5797	6800	12505	.52	11050
May.	58.24	.85	.....	53.62	.78	.....	6199	7940	19337	.83	19141
June.	58.78	.22	.....	54.15	.27	.....	5367	9010	8881	.37	12950
July.	59.06	.44	.....	54.47	.40	.....	5061	9690	11862	.51	15431
Aug.	59.50	.36	.....	54.78	.21	.....	5553	10380	11117	.48	13362
Sept.	59.99	.81	.....	55.12	.64	.....	5969	11180	18906	.79	20597
Oct.	60.71	.35	.....	55.67	.21	.....	9316	12530	14726	.63	15854
Nov.	60.78	.....	.10	55.60	.....	.27	9757	12350	8160	.34	8220
Dec.	60.64	.....	.15	55.30	.....	.29	10073	11610	7755	.33	7286
Annual..	1058.90	.....	.....	1054.23	.....	.....	6599	9356	11233	5.70	11827

* From March 1909 to date the outflow from Rainy Lake was controlled, consequently the inflow into the Lake of the Woods was also largely controlled.

TABLE 74—Continued

SUMMARY OF LAKE LEVELS, OUTFLOW AND INFLOW—LAKE OF THE WOODS

WATERSHED AREA 26,750 SQUARE MILES

Date	Lake Levels						Outflow		Inflow		
	Actual Controlled Level			Computed Natural Level			Actual Controlled Outflow Av. c. f. s.	Computed Natural Outflow Av. c. f. s.	Actual Inflow Av. c. f. s.	Inches Depth on Drainage Area	Computed Natural Inflow Av. c. f. s.
	Mean for Month	Change in Level		Mean for Month	Change in Level						
		Rise Feet	Fall Feet		Rise Feet	Fall Feet					
1913											
Jan.	1060.48	.....	.16	1054.98	.....	.34	10068	10840	7595	.33	6124
Feb.	60.39	.....	.03	54.69	.....	.27	8487	10170	7974	.31	5930
Mar.	60.42	.10	.....	54.41	.....	.26	6807	9560	8352	.36	5974
Apr.	60.74	.58	.....	54.42	.40	.....	8600	9580	17864	.74	15594
May	61.12	.03	.....	54.93	.48	.....	17392	10730	17856	.77	17645
June	60.97	.....	.29	55.44	.49	.....	19618	11950	14987	.62	19162
July	60.92	.19	.....	55.89	.34	.....	15067	13100	18004	.78	18224
Aug.	60.84	.....	.33	56.01	.....	.01	14947	13420	9847	.42	13183
Sept.	60.31	.....	.59	55.74	.....	.45	12746	12710	3323	.14	6064
Oct.	60.14	.07	.....	55.52	.....	.11	7993	12150	9075	.39	10535
Nov.	60.14	.....	.02	55.32	.....	.24	7883	11660	7564	.32	8181
Dec.	60.11	.....	.03	55.06	.....	.29	7820	11030	7356	.32	7026
Annual..	1060.55	.....	.....	1055.20	.....	.....	11468	11417	10838	5.50	11168
1914											
Jan.	1060.09	.....	.00	1054.77	.....	.27	7794	10360	7794	.34	6356
Feb.	60.09	.....	.01	54.50	.....	.24	8220	9750	8049	.31	6003
Mar.	60.00	.....	.15	54.25	.....	.27	10023	9220	7704	.33	5305
Apr.	60.02	.34	.....	54.16	.25	.....	9885	9030	15316	.64	12729
May	60.66	.70	.....	54.79	.85	.....	12327	10400	23147	1.00	22832
June	61.25	.24	.....	55.79	.85	.....	18382	12840	22215	.93	25568
July	61.18	.....	.15	56.36	.45	.....	20158	14380	17840	.77	21236
Aug.	60.65	.....	.71	56.32	.....	.34	17995	14270	7021	.30	9431
Sept.	60.41	.11	.....	56.24	.09	.....	12974	14040	14731	.61	15425
Oct.	60.58	.26	.....	56.31	.03	.....	11210	14240	15229	.66	14662
Nov.	60.73	.06	.....	56.11	.....	.34	9586	13690	10544	.44	8525
Dec.	60.80	.02	.....	55.78	.....	.35	9638	12820	9947	.43	7780
Annual..	1060.54	.....	.....	1055.45	.....	.....	12379	12102	13311	6.76	13017
1915											
Jan.	1060.80	.....	.00	1055.42	.....	.37	9739	11900	9739	.42	6408
Feb	60.80	.....	.02	55.10	.....	.28	9970	11130	9628	.37	6885
Mar	60.74	.....	.08	54.79	.....	.36	9496	10400	8260	.36	5304
Apr	60.78	.19	.....	54.67	.25	.....	14232	10130	17267	.72	13944
May	61.04	.21	.....	55.10	.47	.....	17622	11130	20867	.90	17970
June	61.40	.63	.....	55.70	1.12	.....	19414	12610	29476	1.23	29750
July	61.66	.....	.37	56.80	.52	.....	24445	15650	18726	.81	23705
Aug	60.96	.....	.74	56.94	.....	.14	20005	16080	8567	.37	13676
Sept.	60.44	.....	.31	56.65	.....	.32	11989	15200	7037	.29	10345
Oct.	60.26	.....	.11	56.35	.....	.31	9776	14350	8076	.35	9731
Nov	60.21	.03	.....	56.11	.....	.15	9823	13690	10302	.43	11377
Dec	60.25	.05	.....	55.92	.....	.23	9654	13180	10426	.45	9838
Annual..	1060.78	.....	.....	1055.80	.....	.....	13879	12970	13196	6.70	13263
Average for Period...	1059.75	.....	.....	1056.71	.....	.....	16127	16299	16098	8.17	.....

TABLE 75

DAILY DISCHARGE—RAINY RIVER AT INTERNATIONAL FALLS AND FORT FRANCES

Cubic Feet Per Second

Date	1905											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1											13540	11910
2											13540	11910
3											13420	11910
4											13300	11910
5											13300	11910
6											13300	11910
7											13300	11910
8											13300	11910
9											13065	11910
10											13065	11680
Av											13313	11887
11											13065	11680
12											13065	11680
13											13065	11680
14											12830	11680
15											12830	11680
16											12830	11680
17											12830	11680
18											12830	11680
19											12600	11680
20											12370	11680
Av											12831	11680
21											12140	11680
22											12140	11680
23											12140	11680
24											12140	11680
25										14140	11910	11680
26										14260	11910	11680
27										14020	11910	11450
28										13900	11910	11450
29										13780	11910	11450
30										13780	11910	11450
31										13660		11450
Av											12002	11575
Mon. Mean											12716	11710

Date	1906											
1	11450	10090	8100	6800	11220	14500	16750	15615	12740	9695	7320	6350
2	11450	9865	8100	6585	11450	14500	16750	15615	12740	9500	7150	6350
3	11450	9865	8100	6585	11450	14260	16750	15615	12530	9305	7150	6350
4	11450	9640	8100	6585	11680	14260	16980	15390	12320	9305	7150	6350
5	11450	9640	8100	6370	11680	14500	16980	15390	12110	9115	7150	6195
6	11450	9640	7880	6370	11910	14740	16980	15165	11905	9115	6985	6195
7	11450	9640	7880	6370	12140	14740	16980	15165	11905	9115	6985	6195
8	11450	9420	7880	6370	12370	14980	16980	14940	11905	8740	6985	6195
9	11450	9420	7880	6370	12370	15220	16980	14940	11700	8555	6825	6195
10	11450	9420	7880	6370	12600	15220	16980	14715	11700	8555	6825	6195
Av	11450	9664	7990	6477	11887	14692	16911	15255	12155	9100	7052	6257
11	11450	9420	7660	6370	12370	15220	16290	14715	11495	8555	6825	6195
12	11450	9200	7660	6370	12830	15460	16750	14490	11495	8555	6825	6195
13	11450	9200	7660	6370	12830	15460	16980	14490	11290	8370	6665	6195
14	11450	9200	7660	7015	12830	15220	16980	14490	11085	8370	6665	6195
15	11220	9200	7445	7230	13065	15220	16760	14490	11085	8190	6665	6195
16	11220	8980	7445	7445	13065	15460	16750	14490	11085	8010	6665	6045
17	11220	8980	7445	7660	13065	15460	16980	14490	10880	8010	6665	6045
18	11220	8980	7445	7880	12600	15460	16980	14265	10880	8010	6505	6045
19	10990	8980	7445	8320	13300	15460	16750	14265	10880	8010	6505	6045
20	10990	8760	7230	8540	13300	15700	16520	14265	10880	8010	6505	6045
Av	11266	9090	7509	7320	12925	15412	16773	14445	11106	8209	6649	6120
21	10990	8760	7230	8980	13540	15700	16290	14040	10680	8010	6505	6045
22	10765	8760	7230	9420	13540	15940	16065	13820	10480	7835	6505	6045
23	10765	8540	7015	9640	13780	15940	16065	13820	10480	7835	6505	6045
24	10765	8540	7015	9865	13780	16180	16065	13600	10480	7660	6505	6045
25	10540	8540	7015	10090	13780	16420	16065	13380	10280	7660	6505	6045
26	10540	8540	7015	10315	13780	16420	16065	13380	10280	7490	6350	5895
27	10540	8320	7015	10540	14020	16420	16065	13165	10085	7490	6350	5895
28	10315	8320	6800	10765	14020	16660	15840	13165	9890	7490	6350	5895
29	10315		6800	10990	14020	16660	15840	13165	9890	7490	6350	5895
30	10315		6800	10990	14020	16660	15840	12950	9890	7320	6350	5895
31	10090		6800		14260		15840	12950		7320		5895
Av	10540	8540	6976	10160	13867	16300	16004	13403	10244	7600	6428	5963
Mon. Mean	11068	9138	7475	7986	12925	15468	16545	14337	11168	8280	6710	6109

For explanatory note relating to these discharge values see end of Table.

TABLE 75—Continued

DAILY DISCHARGE—RAINY RIVER AT INTERNATIONAL FALLS AND FORT FRANCES

Cubic Feet Per Second

Date	1907											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	5895	5470	5195	4815	4940	7490	12845	15840	20150	21235	19315	16065
2	5895	5470	5195	4815	4940	7660	12950	15840	20150	21235	19315	15952
3	5895	5470	5195	4815	4940	7835	13165	15615	20270	21235	19197	15840
4	5895	5470	5195	4815	5065	8010	13380	15502	20270	21235	19080	15615
5	5895	5470	5195	4815	5065	8370	13600	15390	20510	21235	19080	15615
6	5750	5470	5195	4815	5195	8555	13710	15502	20510	21235	18845	15390
7	5750	5470	5195	4815	5195	8740	13930	15615	20510	21235	18845	15277
8	5750	5330	5065	4815	5195	8925	14040	15840	20630	21235	18610	15165
9	5750	5330	5065	4815	5195	8925	14265	15840	20750	20990	18610	15165
10	5750	5330	5065	4815	5330	9115	14377	15840	20750	20990	18375	15052
Av	5822	5428	5156	4815	5106	8362	13626	15682	20450	21186	18927	15514
11	5750	5330	5065	4815	5330	9305	14490	16405	20750	20990	18140	14940
12	5750	5330	5065	4815	5330	9500	14490	16980	20510	20750	18140	14827
13	5750	5330	5065	4815	5470	9695	14602	17440	20510	20750	18140	14715
14	5750	5330	5065	4815	5610	9890	14715	17787	20510	20750	17905	14602
15	5750	5330	5065	4815	5610	10085	14715	17905	20630	20750	17905	14490
16	5610	5330	5065	4815	5750	10280	14715	17670	20750	20510	17670	14377
17	5610	5330	5065	4815	5822	10280	14827	17905	20750	20510	17555	14265
18	5610	5330	5065	4815	5895	10480	14940	18022	20750	20270	17555	14152
19	5610	5330	5065	4815	5970	10680	15052	18140	20990	20270	17440	14040
20	5610	5330	5065	4815	6045	10680	15165	18375	20990	20150	17440	13930
Av	5680	5330	5065	4815	5683	10087	14771	17663	20714	20570	17789	14434
21	5610	5195	5065	4815	6045	10880	15165	18610	20750	20030	17210	13820
22	5610	5195	5065	4815	6195	11085	15277	18845	20990	19910	17210	13710
23	5610	5195	5065	4815	6350	11495	15390	18962	21235	19790	16980	13600
24	5610	5195	5065	4815	6505	11700	15502	19080	21112	19550	16750	13490
25	5610	5195	5065	4815	6665	11905	15615	19197	21235	19550	16520	13380
26	5610	5195	5065	4815	6825	12110	15615	19315	21235	19550	16520	13272
27	5470	5195	5065	4815	6985	12320	15615	19432	21235	19550	16520	13165
28	5470	5195	5065	4940	7150	12425	15615	19550	21235	19315	16405	12950
29	5470	.....	5065	4940	7235	12950	15615	19670	21235	19550	16290	12740
30	5470	.....	5065	4940	7320	12740	15615	19790	21235	19550	16177	12635
31	5470	.....	4940	.....	7490	.....	15615	20030	.....	19315	.....	12530
Av	5546	5195	5054	4853	6797	11961	15513	19317	21150	19606	16658	13208
Mon. Mean	5679	5327	5090	4828	5892	10137	14665	17611	20771	20426	17791	14347
Date	1908											
1	12530	9402	7660	6120	6985	9115	13600	15840	13930	11190	8475	6365
2	12425	9305	7575	6120	7067	9210	13820	15840	13710	11085	8340	6330
3	12320	9305	7575	6045	7150	9305	14040	15840	13600	10980	8230	6330
4	12215	9210	7558	6045	7150	9500	14152	15840	13490	10880	8150	6250
5	12110	9115	7490	6045	7235	9597	14377	15840	13380	10680	8115	6215
6	11905	9115	7320	6045	7235	9792	14490	15840	13272	10680	7960	6100
7	11802	9020	7235	6045	7320	9890	14490	15840	13165	10580	7925	6100
8	11700	9020	7150	6045	7320	10085	14490	15840	13165	10480	7810	6025
9	11597	8925	7067	6045	7405	10280	14602	15727	13165	10380	7695	5950
10	11495	8925	6985	6045	7405	10380	14715	15727	13057	10280	7695	5950
Av	12010	9134	7361	6060	7227	9715	14278	15817	13393	10722	8040	6162
11	11392	8832	6905	6120	7490	10480	14940	15615	12950	10180	7620	5835
12	11290	8740	6905	6120	7490	10580	15052	15615	12845	10085	7620	5795
13	11290	8740	6825	6120	7490	10680	15165	15615	12740	9990	7580	5720
14	11187	8647	6825	6120	7575	10880	15277	15615	12740	9890	7545	5680
15	11085	8555	6745	6120	7660	11085	15277	15615	12635	9850	7430	5645
16	10982	8462	6745	6195	7747	11290	15390	15615	12530	9790	7280	5605
17	10880	8370	6665	6195	7835	11495	15502	15615	12320	9770	7240	5570
18	10880	8370	6665	6195	7922	11700	15615	15615	12320	9770	7165	5435
19	10780	8280	6665	6272	8010	11905	15727	15502	12320	9770	7085	5415
20	10680	8190	6585	6350	8100	12007	15840	15502	12110	9555	7015	5435
Av	11045	8519	6753	6181	7732	11210	15379	15592	12551	9865	7358	5614
21	10480	8100	6505	6350	8190	12110	15952	15390	11905	9360	7015	5415
22	10380	8010	6505	6427	8280	12215	15952	15277	11905	9305	6860	5570
23	10280	8010	6427	6505	8370	12320	15952	15052	11905	9210	6820	5570
24	10182	7922	6427	6585	8462	12530	16065	14827	11802	9115	6820	5570
25	10085	7835	6350	6665	8555	12635	16065	14715	11802	9020	6710	5530
26	9987	7835	6350	6745	8647	12740	16065	14490	11700	9020	6595	5490
27	9890	7747	6272	6825	8740	12950	16065	14377	11597	8925	6520	5435
28	9792	7660	6272	6825	8832	13165	16065	14265	11495	8740	6480	5415
29	9695	7660	6195	6905	8925	13272	15952	14152	11392	8590	6480	5380
30	9597	.....	6195	6985	9020	13490	15952	14040	11290	8570	6440	5340
31	9500	.....	6120	.....	9020	.....	15840	14040	.....	8530	.....	5305
Av	9988	7864	6329	6682	8640	12743	15993	14602	11679	8944	6674	5456
Mon. Mean	10981	8528	6799	6307	7891	11223	15241	15314	12541	9815	7357	5735

For explanatory note relating to these discharge values see end of Table.

TABLE 75—Continued

DAILY DISCHARGE—RAINY RIVER AT INTERNATIONAL FALLS AND FORT FRANCES

Cubic Feet Per Second

Date	1909											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	5305	4555	3830	4677	1332	1844	11705	9720	8915	8859	7180	5744
2	5270	4555	3830	4665	1350	2138	11746	9620	8316	8767	7180	5800
3	5250	4555	3810	4665	1356	2560	11849	9800	8878	8730	7180	7116
4	5270	4525	3810	4350	1368	2960	11767	10600	9600	8676	7180	8280
5	5195	4490	3810	4115	1380	3450	11685	10320	9780	8658	7180	9480
6	5195	4270	3810	3682	300	3988	11951	10540	9940	10240	7180	11080
7	5160	4225	3820	3638	300	4602	11746	10720	8604	10320	7180	11080
8	5090	4180	3810	3550	300	4853	11787	10800	8010	10280	6555	11080
9	5090	4180	3760	3450	300	5875	11849	10880	9290	10260	6085	11080
10	5070	4150	3760	3410	300	6025	11685	11420	9960	10400	5604	11080
Av	5190	4369	3805	4020	829	3830	11777	10442	9129	9519	6850	9182
11	4980	4120	3682	3330	300	6385	11541	11787	10680	10540	5105	11080
12	4980	4090	3594	3270	300	6070	11400	11808	10740	10740	4652	11080
13	4765	4075	3510	2205	300	6462	10360	13150	10800	10920	4046	11080
14	4910	4030	3450	2088	300	6865	10440	13150	10760	10222	4057	11080
15	4910	4030	3360	1990	300	7052	10340	13150	10740	9520	4080	11080
16	4875	4000	3310	1871	300	7148	10840	13150	10720	8859	4149	11080
17	4890	4000	4715	1785	300	7052	10940	13150	10720	8226	4218	11080
18	4835	3975	4840	1610	300	7148	11541	13150	10620	7620	4302	11080
19	4765	3950	4944	1476	300	7180	12156	13150	9680	7052	4374	11080
20	4765	3940	4944	1338	300	7212	12156	12999	8804	7180	4434	11080
Av	4868	4021	4035	2096	300	6857	11171	12864	10426	9088	4342	11080
21	4730	3930	4944	1230	300	7244	12156	13646	8804	7180	4578	11080
22	4690	3905	4944	1236	300	8568	12054	13214	8933	7180	4727	11080
23	4690	3905	4944	1248	300	8785	11767	12784	8989	7180	5132	11080
24	4710	3905	4944	1260	300	9252	11080	11644	9026	7180	4338	11080
25	4765	3880	4941	1272	300	9640	10860	10540	9063	7180	3616	11080
26	4765	3855	4715	1278	300	9960	10640	7308	9081	7180	3977	11080
27	4690	3820	4702	1290	300	10400	9328	7571	9100	7180	5688	11080
28	4690	3820	4690	1296	300	10860	10120	7772	9100	7180	5744	11080
29	4820	.....	4690	1308	300	11320	10360	7976	9007	7180	5800	11080
30	4590	.....	4677	1320	1642	11644	9940	8190	8933	7180	5800	11080
31	4540	.....	4677	.....	1740	.....	9840	8010	.....	7180	.....	11080
Av	4680	3878	4806	1274	553	9767	10740	9878	9004	7180	4940	11080
Mon. Mean	4905	4104	4235	2463	560	6818	11214	11023	9520	8550	5377	10468

Date	1910											
1	11080	10800	10220	10940	12426	8841	10000	4069	5324	4918	6632	4918
2	11080	10780	10200	11020	12636	10800	10400	6040	5051	4853	3594	4918
3	11080	10760	10180	11080	12849	8841	9720	6040	5051	4790	6493	5118
4	11080	10740	10160	11140	12849	7942	9081	6340	5051	4790	6803	3390
5	11080	10720	10140	11200	12636	8658	8478	6115	5051	4790	6803	2102
6	11080	10680	10120	11240	12636	9404	9214	6115	5051	4790	5010	4302
7	11080	10660	10100	11240	12636	11603	8841	4184	5051	5860	3561	4302
8	11080	10640	10080	11240	12636	10800	7276	5324	5051	5464	6570	5051
9	11060	10620	10060	11240	12636	12849	7036	6190	5051	5464	6570	5186
10	11060	10600	10040	11240	13064	12426	4918	5464	5051	2924	6601	5324
Av	11076	10700	10130	11158	12700	10216	8496	5588	5078	4884	5864	4461
11	11040	10580	10020	11240	14372	12849	5604	4790	5051	5744	6570	4362
12	11040	10560	10000	11240	13712	12321	6648	5186	5051	5744	6725	3510
13	11020	10540	9980	11240	13712	11808	6958	5324	5186	5965	6070	4069
14	11020	10520	9960	11240	10000	12849	6803	4422	4918	6190	5464	3954
15	11000	10500	9940	11240	10100	12218	6648	4422	4918	7116	6570	4790
16	11000	10480	9920	11200	10200	12300	6340	4422	4918	3017	6725	4542
17	10980	10460	9900	11400	10200	12218	4918	5051	4918	4299	6725	4422
18	10980	10440	9880	11460	11000	8748	3726	5051	5051	5254	6725	3310
19	10960	10420	9860	11541	11603	8785	6115	5186	5051	5965	6725	2408
20	10960	10400	9840	11644	8028	8841	6040	5186	5051	6040	6725	4069
Av	11000	10490	9930	11345	11293	11294	5980	4904	5011	5533	6502	3944
21	10940	10380	9820	11746	9119	8841	5890	4482	5051	5965	4790	4422
22	10940	10360	9800	11849	9480	9800	5464	3839	5051	6115	6340	4542
23	10920	10340	9800	11972	9880	9600	4918	5186	5051	5145	5744	4000
24	10920	10320	9900	12054	11808	11000	4879	5324	5051	4302	5324	3885
25	10900	10300	10100	12197	11000	10800	4940	5324	5051	6617	5464	3320
26	10900	10280	10280	12279	8841	10300	4665	5464	5186	6617	5186	2807
27	10880	10260	10420	12426	10400	9800	4470	6803	4918	6570	3781	2360
28	10880	10240	10540	12636	12218	9800	5604	5186	5051	6477	2654	3726
29	10860	.....	10630	12636	11340	9800	5890	3839	5051	6493	4302	4542
30	10840	.....	10760	12218	10500	9214	6040	5604	4918	5950	4918	4665
31	10820	.....	10840	.....	9640	.....	4983	5464	.....	5436	.....	4790
Av	10891	10310	10265	12201	10384	9896	5240	5138	5038	5972	4850	3914
Mon. Mean	10986	10514	10112	11568	11424	10469	6529	5207	5043	5473	5739	4100

For explanatory note relating to these discharge values see end of Table.

TABLE 75—Continued

DAILY DISCHARGE—RAINY RIVER AT INTERNATIONAL FALLS AND FORT FRANCES

Cubic Feet Per Second

Date	1911											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	2969	2488	2408	2600	3220	6175	3885	5786	6480	5180	4970	5630
2	2032	2488	2448	2600	3919	6175	3420	6710	6515	4110	4850	5615
3	2924	2654	2568	2600	4080	6175	3007	6710	6586	5250	4890	4815
4	3210	2744	3017	2600	3965	5875	3170	6787	5835	5535	4400	4605
5	3112	2288	2654	2600	3965	5590	3350	6942	6056	5500	4220	5570
6	3112	1892	2328	2600	3850	6710	4080	5618	6415	5560	4260	5575
7	3954	2654	2600	2600	3561	6787	4080	4470	6180	5220	4770	5605
8	2969	2798	2600	2600	3300	6787	4043	6555	6300	4475	4785	5690
9	2175	2834	2600	2600	3827	6787	3954	6679	6120	4160	5012	6095
10	3210	2834	2600	2600	4410	6787	3885	6865	5700	4680	4987	5090
Av.	2967	2567	2582	2600	3810	6385	3687	6312	6220	4964	4714	5429
11	3410	2744	2600	2600	5037	6741	4230	6865	5690	5470	4760	4635
12	3726	2288	2600	2600	5307	5520	4172	6865	5980	5480	4315	5645
13	3616	1892	2600	2600	5078	6741	4115	4350	5990	5490	4250	5670
14	3510	2600	2600	2600	4314	6725	4080	4820	5950	5050	5060	5660
15	2870	2600	2600	2600	3616	6694	4290	6750	5930	4180	5350	5650
16	2312	2600	2600	2600	5240	6648	4172	6730	5990	4100	5420	5705
17	2744	2600	2600	2600	5875	6570	4057	6470	4948	4675	5445	4940
18	3210	2600	2600	2600	4840	6462	3977	6385	4445	5300	5555	4370
19	2744	2600	2600	2600	5520	4970	3977	6650	6055	5490	3070	5670
20	2654	2600	2600	2600	5950	6325	3450	5134	5838	5470	3895	5700
Av.	3080	2512	2600	2600	5078	6340	4052	6102	5682	5071	4712	5365
21	2654	2600	2600	2600	5172	6220	3200	4847	5660	4880	5630	5670
22	2328	2600	2600	2600	4470	6055	3200	6540	5660	4590	5620	5700
23	2032	2600	2600	2600	5800	5875	3605	6585	5570	4480	5595	5640
24	2488	2600	2600	2600	5950	5730	4057	6711	4595	5015	5915	1080
25	2328	2416	2600	2600	5800	5548	3350	6510	4225	5435	6190	2000
26	2408	1824	2600	2600	5800	5307	5875	6740	5150	5445	5110	5355
27	2488	2328	2600	2600	5800	5307	6175	5294	5270	5475	4090	5990
28	2744	2368	2600	2600	4970	5199	6370	4968	5550	5260	5620	6100
29	2328	.....	2600	2600	4230	4230	6632	6500	5520	4410	5650	6085
30	1962	.....	2600	2600	6070	3770	5744	6510	5560	3960	5625	5705
31	2568	.....	2600	.....	6175	.....	4944	6500	.....	4840	.....	3330
Av.	2393	2417	2600	2600	5476	5324	4832	6155	5276	4882	5505	4787
Mon. Mean	2800	2505	2594	2600	4810	6016	4211	6189	5725	4969	4977	5180

Date	1912											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	4490	5085	4856	3953	5880	6315	6078	10091	6448	7279	7087	5801
2	5695	5440	4888	5022	5885	5440	5663	10072	5892	7202	7122	6433
3	5665	5845	4197	5028	5915	5325	5880	10077	6470	7039	6184	6725
4	5095	4620	4102	4997	6190	6437	5472	9462	8408	7089	6095	7001
5	5640	3995	5101	5002	5250	6382	5402	8953	8490	7078	7199	6968
6	5815	5105	5037	4984	4795	6410	5905	9825	8363	6199	7146	6655
7	4450	5090	5090	3725	6185	6305	5394	9837	7997	6543	7100	6149
8	3995	5050	5102	3616	6570	6159	5835	9714	7254	7060	7073	5828
9	5725	4985	5063	5049	6610	5971	6932	9333	7266	7060	6791	5860
10	5720	4870	4205	5068	6692	5889	7043	9232	8057	7039	6175	6913
Av.	5289	5009	4764	4644	5997	6063	5960	9669	7465	6958	6797	6433
11	5725	4105	4108	5096	6734	6267	8074	8442	7962	7045	5998	6973
12	5940	3990	5105	5119	5435	6239	8285	8299	7799	7100	6568	6972
13	6220	5030	5060	5052	4800	6283	8218	8208	7831	*6880	6923	6962
14	3700	5035	5025	4031	6690	6312	7576	8246	7880	6664	7020	6675
15	5030	5000	5046	4409	6695	6255	7494	7965	7260	7083	6955	5412
16	5855	5009	4960	5100	6690	5570	8613	7048	7234	7044	7041	5532
17	5930	5017	3828	5066	6350	5730	8835	7528	7812	7047	5261	7267
18	5900	4119	3890	5045	6355	6042	8148	7720	7579	6852	6511	6987
19	5915	3976	4812	5055	4855	6093	6981	7530	6995	6987	6999	6850
20	5915	5035	5045	5048	5200	6180	7604	8416	6923	6594	7015	6989
Av.	5613	4632	4688	4902	5980	6097	7983	7940	7528	6929	6629	6662
21	4700	5044	5096	4130	6730	6261	8633	8194	6588	5824	7089	6762
22	4320	5057	5095	3950	6743	6415	8405	6865	5910	7076	7033	5900
23	5915	5063	5004	5045	6720	5823	8936	6728	6063	7111	7050	4650
24	5920	5014	3590	5055	6770	5693	9012	6932	6930	7070	6174	6581
25	5875	4169	4429	5385	6577	6190	8940	5885	7315	7056	5978	5011
26	5760	4080	5070	5806	4892	5835	9061	6166	8892	7078	7002	4591
27	5495	5068	5022	5900	5175	5969	8105	6614	8223	6135	7054	5995
28	4255	5066	5057	4597	6680	5853	8572	6839	7179	5927	7047	6549
29	3935	5056	5090	4348	6495	5555	9946	7055	6980	6968	6687	5762
30	5080	.....	4910	5865	6350	5267	9569	7152	7024	7076	6422	5137
31	5080	.....	4012	.....	5814	.....	10087	7177	.....	7112	.....	6751
Av.	5122	4846	4759	5008	6267	5886	9024	6873	7110	6767	6754	5790
Mon. Mean	5334	4828	4738	4851	6088	6016	7700	8120	7368	6881	6727	6280

* Interpolated by Engineers of the U. S. G. S.

For explanatory note relating to these discharge values see end of Table.

*TABLE 75—Continued

DAILY DISCHARGE—RAINY RIVER AT INTERNATIONAL FALLS AND FORT FRANCES

Cubic Feet Per Second

Date	1913											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	6805	6841	6850	6846	6826	5535	11023	9490	5251	6126	5965	5823
2	6795	5647	5602	6246	6831	6216	11058	8829	6328	6892	5406	6980
3	6827	6385	5675	5870	6814	6960	11004	9223	6935	6980	5445	6987
4	6978	6864	6749	6187	5978	6852	11606	9048	7019	6970	6110	6540
5	5980	6887	6751	6634	6331	6868	11438	9134	6703	6456	6055	6077
6	5216	6895	6900	4406	6827	6904	11503	9139	6997	6040	5994	6542
7	6858	6853	6905	5438	6827	6820	10343	9176	5885	6565	6080	5430
8	6796	6900	6919	6621	6814	6273	10106	10414	7262	6435	6075	5877
9	6892	5738	5840	6801	6881	6343	9633	10022	6821	6633	5493	6901
10	6920	5849	5725	6865	6820	6795	10820	9503	7016	6920	5759	6930
Av	6607	6486	6392	6191	6695	6557	10853	9398	6622	6602	5838	6409
11	6921	6879	6750	6792	5938	6870	13475	8758	7014	6940	6105	6864
12	5778	6884	6780	6783	6172	6911	13510	9108	6964	6207	6100	6963
13	6124	6878	6716	5883	6761	6902	12246	9076	7010	7389	6135	6944
14	6911	6872	6798	5419	6788	7052	13539	9207	6238	7170	5889	6222
15	6932	6853	6739	6715	6730	6729	14493	9264	6455	6932	6222	6391
16	6941	5618	5464	6837	6765	6398	13715	8968	6960	6257	5310	6974
17	6909	5477	5653	6801	6820	7492	14576	8758	7094	6360	5242	6778
18	6947	6865	6730	6716	5994	7410	15243	8654	7000	6150	6115	6988
19	6015	6877	6747	6751	6163	7336	15290	9019	6985	6048	6005	6983
20	5073	6853	6682	5324	6772	7473	14019	8914	6975	5545	6440	6966
Av	6455	6606	6506	6402	6490	7057	14011	8973	6869	6500	5956	6808
21	6956	6894	6752	6254	6796	7468	13187	9136	6535	6080	5675	6205
22	6945	6844	6715	6368	6777	6689	13221	9118	6909	6140	6558	5945
23	6909	5631	5598	6706	6760	7324	13254	8888	7060	6105	6237	6095
24	6937	6054	4921	6758	6785	7814	13331	6232	7026	6100	6468	6118
25	6955	6864	6840	6726	6162	7840	13225	7226	7015	6120	6780	4908
26	5896	6847	6813	6746	6088	7856	13262	7022	6994	5474	7175	4608
27	6273	6830	6811	5873	6749	8798	12802	6965	6915	5550	6931	5201
28	6856	6830	6775	6180	6550	8832	12844	7005	6121	6070	6979	6225
29	6928	.....	6800	6696	6889	9673	13292	6967	6600	6105	6606	5525
30	6977	.....	5946	6913	6896	9863	13732	6665	7030	6026	5519	6095
31	6981	.....	5590	.....	6906	.....	9794	5660	.....	6075	.....	6299
Av	6783	6599	6360	6522	6669	8216	12904	7353	6820	5986	6493	5747
Mon. Mean	6620	6561	6417	6372	6620	7277	12599	8535	6770	6350	6096	6303

Date	1914											
1	6070	6439	6164	6898	6868	7874	7778	10703	10410	10526	7601	11040
2	6097	6586	6418	6998	6784	8834	8316	8331	10580	10510	8935	10929
3	6933	6949	6930	6912	5988	8976	8966	9081	10540	10005	10839	11069
4	6251	7000	6896	6892	6396	9043	8416	10984	10528	7019	10778	10853
5	5492	7020	6956	6050	6598	8749	6184	10854	10528	8651	10821	10399
6	6935	6938	6942	6320	6798	8792	7216	10937	7630	10353	10781	7458
7	6877	6976	6922	6936	6840	6646	10058	10772	4270	10570	10788	8272
8	6870	6468	5775	6916	6788	7753	9829	10895	9216	10454	8271	10661
9	6785	6482	6394	6918	6752	9054	10346	8816	10599	10482	9170	11171
10	6856	6970	7064	6928	5997	9421	10669	9021	10600	10540	10788	10711
Av	6517	6783	6651	6777	6581	8514	8778	10039	9490	9910	9877	10256
11	6218	6978	7006	6910	6214	8906	10739	10907	10590	7641	10810	10740
12	6536	7078	7030	6077	6802	8415	7815	10948	10570	8833	10800	10938
13	6961	7050	6986	6244	6814	8860	10756	10902	7713	10508	10506	7225
14	6953	6944	7016	6902	6842	6673	11023	10855	8889	9996	9946	8684
15	6957	6312	5589	6895	6846	7203	10953	10877	10600	9269	7783	9308
16	6980	6436	6384	6894	6818	8686	10933	7730	10522	9660	8959	10218
17	7021	7280	6950	6932	6269	8953	11376	8618	10520	9680	10285	9290
18	6245	6744	7002	6852	6272	9126	11819	10654	10513	7456	10762	9925
19	6455	6978	7022	5878	6804	9070	9503	10746	10500	8371	11134	9991
20	6920	7042	7006	6280	6818	9050	10472	10599	8045	10533	10744	6911
Av	6725	6884	6799	6586	6650	8494	10539	10284	9846	9195	10173	9323
21	6950	8023	7016	6900	6864	6968	12061	10578	8848	10462	11145	7834
22	6921	5967	6180	6834	6832	7644	12441	10549	10512	10671	8192	9124
23	6959	6410	6392	6868	6856	8745	12775	8549	10542	10991	9190	9313
24	6957	6974	6958	6878	6102	8916	12541	8871	10505	10397	11059	9666
25	6326	6988	6850	6876	6620	9466	12445	10607	10515	7007	10911	3448
26	7140	7018	6944	6052	7398	9504	10773	10609	10414	8977	10891	1224
27	7036	6998	6928	6252	7432	9104	11503	10628	8187	10648	10003	3710
28	6958	7020	6928	6862	7940	6606	12262	10658	8673	10848	9416	8318
29	7004	.....	6056	6796	8630	8198	12522	10628	10520	10808	8317	9950
30	6936	.....	6270	6856	8954	8670	11247	7735	10385	10801	8171	10410
31	6685	.....	6880	.....	6963	.....	10657	8725	.....	10739	.....	10017
Av	6897	6925	6673	6717	7326	8382	11936	9831	9910	10213	9729	
Mon. Mean	6719	6859	6706	6693	6868	8463	10464	10044	9749	9787	9926	8994

For explanatory note relating to these discharge values see end of Table.

* For 1915 records see page 328.

TABLE 75—Continued

DAILY DISCHARGE—RAINY RIVER AT INTERNATIONAL FALLS AND FORT FRANCES—Continued.

Explanatory Notes

The estimates of daily discharge between October 25th, 1905, and March 10th, 1909, are based on observed water levels above Koochiching Falls, and the rating curves of Plate 83.

The estimates of daily discharge between March 10th and May 30th, 1909, are based, principally, upon the following records of construction operations and the curve of Plate 86, showing the relation between controlled outflow, stage and fall for Rainy Lake.

Notes from records of J. G. White & Company for 1909

Mar. 16 Blew out dirt at head of canal. Lowered water on falls several inches. Power House gates not yet in place.
18 Blasted out more of coffer on Canadian side at head of canal.
23 River lowered 18 inches, due to blowing out coffer at head of Canadian canal.
Apr. 5 Finished filling main coffer and started to sheath.
8 Lowered apron for coffer across main channel. Shall close gates in canal and turn all water through forebay. (This was probably done on April 12th or 13th. Engrs.)
16 Closed all but one gate in forebay. One gate handles the water.
19 Closed off water, midstream coffer.
May 6 Shut down Canadian waste gates, holding water.

Notes from records of Minnesota & Ontario Power Company for 1909

Mar. 17 Coffer "B" blown out.
May 6 Balance of waste gates closed.
27 Log sluice open.
28 Gates opened.

The estimates of daily discharge between May 30th, 1909, and August 14th, 1911, during periods when the river was free from backwater, are based on the water levels observed at the Minnesota & Ontario Power Company's lower gauge corrected for an average fall of 0.2 foot between this gauge and the gauge on the U. S. Dock.

The estimates of daily discharge during periods of backwater, between the above dates, are based on meteorological data, discharge records for the Little Fork and the Big Fork Rivers, discharge measurements of the Rainy River at International Falls and Fort Frances, monthly estimates of discharge made by the Minnesota & Ontario Power Company on the basis of power developed, head, etc., between September, 1910, and September, 1911, and the curve of Plate 86.

For the period between August 14th, 1911, and Dec. 31st, 1914. daily discharge records have been furnished by the Department of Public Works, Canada, based on discharge measurements, power output of the Minnesota & Ontario Power Company's plant, gate openings, head, etc.

The following additional notes from the records of J. G. White & Company have a bearing on the discharge of the Rainy River during the construction period.

1908

Oct. 19 Began work. Found cofferdam in bad condition.
26 Built small coffer to close gap in main dam.
30 (To this date): Removing old coffer at head of forebay. Plan to cut coffer at points opposite Power House walls, and join coffers to these walls.
Dec. 21 Trying to pump out Canadian wheel pit. Excavating ledge in American wheel pit.
24 Completed small tailrace coffer to Canadian wheel pit.

1909

Jan. 4 Excavating in American channel and forebay. Drilling in Canadian forebay.
26 Headgates at head of Canadian in place.
Mar. 1 Most of coffer out at head of Canadian canal.
3 Started closing gap in coffer in main channel.
4 Started taking out dirt in coffer to Canadian forebay.
9 Placing headgates in Canadian power house.
30 Coffer across river is finished. Finished putting gates in Canadian power house.
Apr. 1 Blasted out ledge at head of Canadian forebay.
29 Started laying stone in dam. Are adding 6 feet to old P. & McG. coffer across main river. Removing old P. & McG. coffer below falls.
May 5 Finished removing old coffer west of Canadian wheel pit.
June 8 Started raising coffer in American channel.
17 Removed coffer in Canadian tailrace.
22 Broke out ledge in Canadian tailrace.
29 Filling coffer in main channel.
30 Part of dam finished; last section just begun.
July 10 Dam finished ready for coping.
Sept. 28 Finish temporary dam.
Oct. 16 Broke out ledge in American tail race.
19 Began taking out coffer in American channe
28 Finish unloading coffer dam.
30 Blew out coffer dam.

TABLE 76

STORAGE, OUTFLOW, AND INFLOW—RAINY LAKE

Date	1905 Lake Level	1905 Change in Storage Feet Depth	1905 Change in Storage Rate c. f. s.	1905 Outflow Rate c. f. s.	1905 Inflow Rate c. f. s.	1906 Lake Level	1906 Change in Storage Feet Depth	1906 Change in Storage Rate c. f. s.	1906 Outflow Rate c. f. s.	1906 Inflow Rate c. f. s.
Jan. 1–10						492.10	0.00	0	11450	11450
11–20						491.90	— .20	— 2226	11266	9040
21–31						491.50	— .40	— 4048	10540	6492
Feb. 1–10						491.20	— .30	— 3339	9664	6325
11–20						490.90	— .30	— 3339	9090	5751
21–28						490.60	— .30	— 4174	8540	4366
Mar. 1–10						490.40	— .20	— 2226	7990	5764
11–20						490.20	— .20	— 2226	7509	5283
21–31						490.00	— .20	— 2024	6976	4952
Apr. 1–10						489.70	— .30	— 3339	6477	3138
11–20						491.00	1.30	14472	7320	21792
21–30						492.00	1.00	11132	10160	21292
May 1–10						492.50	.50	5566	11887	17453
11–20						493.00	.50	5566	12925	18491
21–31						493.50	.50	5060	13867	18927
June 1–10						493.80	.30	3339	14692	18031
11–20						494.10	.30	3339	15412	18751
21–30						494.40	.30	3339	16300	19639
July 1–10						494.50	.10	1113	16911	18024
11–20						494.20	— .30	— 3339	16773	13434
21–31						493.90	— .30	— 3036	16004	12968
Aug. 1–10						493.50	— .40	— 4453	15255	10802
11–20						493.20	— .30	— 3339	14445	11106
21–31						492.70	— .50	— 5060	13403	8343
Sept. 1–10						492.10	— .60	— 6679	12155	5476
11–20						491.80	— .30	— 3339	11106	7767
21–30						491.30	— .50	— 5566	10243	4677
Oct. 1–10						490.80	— .50	— 5566	9100	3534
11–20						490.55	— .25	— 2782	8209	5427
21–31	493.00					490.30	— .25	— 2530	7600	5070
Nov. 1–10	492.80	—0.20	—2226	13313	11087	490.00	— .30	— 3339	7052	3713
11–20	492.45	— .35	—3895	12831	8936	489.80	— .20	— 2226	6649	4423
21–30	492.30	— .15	—1669	12002	10333	489.70	— .10	— 1113	6428	5315
Dec. 1–10	492.25	— .05	— 556	11887	11331	489.60	— .10	— 1113	6257	5144
11–20	492.20	— .05	— 556	11680	11124	489.50	— .10	— 1113	6120	5007
21–31	492.10	— .10	—1012	11575	10563	489.45	— .05	— 506	5963	5457

Date	1907 Lake Level	1907 Change in Storage Feet Depth	1907 Change in Storage Rate c. f. s.	1907 Outflow Rate c. f. s.	1907 Inflow Rate c. f. s.	1908 Lake Level	1908 Change in Storage Feet Depth	1908 Change in Storage Rate c. f. s.	1908 Outflow Rate c. f. s.	1908 Inflow Rate c. f. s.
Jan. 1–10	489.35	—0.10	— 1113	5822	4709	492.05	—0.55	—6122	12010	5888
11–20	489.25	— .10	— 1113	5680	4567	491.65	— .40	—4453	11045	6592
21–31	489.18	— .07	— 708	5546	4838	491.25	— .40	—4048	9988	5940
Feb. 1–10	489.10	— .08	— 890	5428	4538	490.95	— .30	—3339	9134	5795
11–20	489.00	— .10	— 1113	5330	4217	490.60	— .35	—3895	8519	4624
21–28	488.95	— .05	— 695	5195	4500	490.40	— .20	—2473	7864	5391
Mar. 1–10	488.85	— .10	— 1113	5156	4043	490.00	— .40	—4453	7361	2908
11–20	488.75	— .10	— 1113	5065	3952	489.80	— .20	—2226	6753	4527
21–31	488.65	— .10	— 1012	5054	4042	489.60	— .20	—2024	6329	4305
Apr. 1–10	488.65	0	0	4815	4815	489.60	0	0	6060	6060
11–20	488.65	0	0	4815	4815	489.70	.10	1113	6181	7294
21–30	488.78	.13	1447	4853	6300	490.05	.35	3895	6682	10577
May 1–10	489.05	.27	3005	5106	8111	490.30	.25	2782	7227	10009
11–20	489.50	.45	5009	5683	10692	490.65	.35	3895	7732	11627
21–31	490.30	.80	8096	6797	14893	491.05	.40	4048	8640	12688
June 1–10	491.15	.85	9462	8362	17824	491.70	.65	7235	9715	16950
11–20	491.87	.72	8014	10087	18101	492.40	.70	7792	11210	19002
21–30	492.70	.83	9240	11961	21201	493.05	.65	7235	12743	19978
July 1–10	493.40	.70	7792	13626	21418	493.65	.60	6679	14278	20957
11–20	493.75	.35	3895	14771	18666	494.10	.45	5009	15379	20388
21–31	494.03	.28	2834	15513	18347	494.05	— .05	— 506	15993	15487
Aug. 1–10	494.30	.27	3005	15682	18687	493.95	— .10	—1113	15817	14704
11–20	495.20	.90	10019	17663	27682	493.85	— .10	—1113	15592	14479
21–31	495.85	.65	6578	19317	25895	493.20	— .65	—6578	14602	8024
Sept. 1–10	496.10	.25	2782	20450	23232	492.80	— .40	—4453	13393	8940
11–20	496.25	.15	1669	20714	22383	492.30	— .50	—5566	12551	6985
21–30	496.30	.05	556	21150	21706	491.95	— .35	—3895	11679	7784
Oct. 1–10	496.20	— .10	— 1113	21186	20073	491.60	— .35	—3895	10722	6827
11–20	495.80	— .40	— 4453	20570	16117	491.20	— .40	—4453	9865	5412
21–31	495.50	— .30	— 3036	19606	16570	490.75	— .45	—4554	8944	4390
Nov. 1–10	495.00	— .50	— 5566	18927	13361	490.35	— .40	—4453	8040	3587
11–20	494.65	— .35	— 3895	17789	13894	490.00	— .35	—3895	7358	3463
21–30	494.15	— .50	— 5566	16658	11092	489.70	— .30	—3339	6674	3335
Dec. 1–10	493.65	— .50	— 5566	15514	9948	489.40	— .30	—3339	6162	2823
11–20	493.15	— .50	— 5566	14434	8868	489.10	— .30	—3339	5614	2275
21–31	492.60	— .55	— 5566	13208	7642	488.95	— .15	—1518	5456	3938

Lake levels refer to elevations on the 1st, 11th and 21st of each month.

TABLE 76—Continued

STORAGE, OUTFLOW, AND INFLOW—RAINY LAKE

Date	1909					1910				
	Lake Level	Change in Storage		Outflow Rate c. f. s.	Inflow Rate c. f. s.	Lake Level	Change in Storage		Outflow Rate c. f. s.	Inflow Rate c. f. s.
		Feet Depth	Rate c. f. s.				Feet Depth	Rate c. f. s.		
Jan. 1-10	488.80	−0.15	− 1669	5190	3521	496.50	−0.04	− 445	11076	10631
11-20	488.60	− .20	− 2226	4868	2642	496.36	− .14	− 1558	11000	9442
21-31	488.35	− .25	− 2530	4680	2150	496.04	− .32	− 3238	10891	7653
Feb. 1-10	488.10	− .25	− 2782	4369	1587	495.68	− .36	− 4007	10700	6693
11-20	488.00	− .10	− 1113	4021	2908	495.26	− .42	− 4675	10490	5815
21-28	487.85	− .15	− 2086	3878	1792	494.82	− .44	− 6123	10310	4187
Mar. 1-10	487.70	− .15	− 1669	3805	2136	494.37	− .45	− 5009	10130	5121
11-20	487.50	− .20	− 2226	4035	1809	494.05	− .32	− 3561	9930	6369
21-31	487.30	− .20	− 2024	4806	2782	494.32	.27	2732	10265	12997
Apr. 1-10	487.25	− .05	− 556	4020	3464	494.84	.52	5788	11158	16946
11-20	487.30	.05	556	2096	2652	495.28	.44	4898	11345	16243
21-30	487.61	.31	3450	1274	4724	495.48	.20	2226	12201	14427
May 1-10	488.34	.73	8126	829	8955	495.43	− .05	− 556	12700	12144
11-20	490.14	1.80	20037	300	20337	495.40	− .03	− 333	11293	10960
21-31	491.81	1.67	16900	553	17453	495.27	− .13	− 1316	10384	9068
June 1-10	492.80	.99	11021	3830	14851	494.91	− .36	− 4007	10216	6209
11-20	493.75	.95	10575	6857	17432	494.56	− .35	− 3895	11294	7399
21-30	494.60	.85	9462	9767	19229	494.10	− .46	− 5121	9896	4775
July 1-10	494.75	.15	1669	11777	13446	493.74	− .36	− 4007	8496	4489
11-20	494.76	.01	111	11171	11282	493.51	− .23	− 2560	5980	3420
21-31	494.70	− .06	− 607	10740	10133	493.33	− .18	− 1822	5240	3418
Aug. 1-10	494.96	.26	2893	10442	13335	493.21	− .12	− 1335	5588	4253
11-20	495.05	.09	1001	12864	13865	492.90	− .31	− 3450	4904	1454
21-31	495.18	.13	1316	9878	11194	492.72	− .18	− 1822	5138	3316
Sept. 1-10	495.23	.05	556	9129	9685	492.53	− .19	− 2114	5078	2964
11-20	495.06	− .17	− 1892	10426	8534	492.17	− .36	− 4007	5011	1004
21-30	494.95	− .11	− 1224	9004	7780	491.89	− .28	− 3116	5038	1922
Oct. 1-10	494.76	− .19	− 2114	9519	7405	491.59	− .30	− 3339	4864	1525
11-20	494.77	.01	111	9088	9199	491.40	− .19	− 2114	5533	3419
21-31	494.93	.16	1619	7180	8799	491.00	− .40	− 4048	5972	1924
Nov. 1-10	495.17	.24	2671	6850	9521	490.58	− .42	− 4675	5864	1189
11-20	495.66	.49	5455	4342	9797	490.28	− .30	− 3339	6502	3163
21-30	496.22	.56	6233	4940	11173	489.93	− .35	− 3895	4850	955
Dec. 1-10	496.60	.38	4229	9182	13411	489.60	− .33	− 3673	4461	788
11-20	496.65	.05	556	11080	11636	489.30	− .30	− 3339	3944	605
21-31	496.54	− .11	− 1113	11080	9967	489.06	− .24	− 2429	3914	1485
Date	1911					1912				
Jan. 1-10	488.98	−0.08	− 890	2967	2077	491.92	−0.20	− 2226	5289	3063
11-20	488.88	− .10	− 1113	3080	1967	491.63	− .29	− 3227	5613	2386
21-31	488.78	− .10	− 1012	2393	1381	491.36	− .27	− 2732	5122	2390
Feb. 1-10	488.70	− .08	− 890	2567	1677	491.18	− .18	− 2003	5009	3006
11-20	488.62	− .08	− 890	2512	1622	491.02	− .16	− 1780	4632	2852
21-28	488.57	− .05	− 695	2417	1722	490.74	− .28	− 3462	4846	1384
Mar. 1-10	488.50	− .07	− 779	2582	1803	490.50	− .24	− 2671	4764	2093
11-20	488.37	− .13	− 1447	2600	1153	490.20	− .30	− 3339	4688	1349
21-31	488.30	− .07	− 708	2600	1892	489.91	− .29	− 2935	4759	1824
Apr. 1-10	488.50	.20	2226	2600	4826	489.75	− .16	− 1780	4644	2864
11-20	489.05	.55	6122	2600	8722	489.93	.18	2003	4902	6905
21-30	489.68	.63	7013	2600	9613	490.42	.49	5455	5008	10463
May 1-10	490.05	.37	4118	3810	7928	491.16	.74	8237	5997	14234
11-20	490.40	.35	3895	5078	8973	491.96	.80	8905	5980	14885
21-31	490.89	.49	4969	5476	10445	492.92	.96	9715	6267	15982
June 1-10	491.50	.61	6790	6385	13175	493.92	1.00	11132	6063	17195
11-20	492.05	.55	6122	6340	12462	494.72	.80	8905	6097	15002
21-30	492.44	.39	4341	5324	9665	495.46	.74	8237	5886	14123
July 1-10	492.80	.36	4007	3687	7694	495.91	.45	5009	5960	10969
11-20	493.10	.30	3339	4052	7391	496.19	.28	3116	7983	11099
21-31	493.43	.33	3340	4832	8172	496.38	.19	1923	9024	10947
Aug. 1-10	493.63	.20	2226	6312	8538	496.24	− .14	− 1558	9669	8111
11-20	493.60	− .03	− 333	6102	5769	496.19	− .05	− 556	7940	7384
21-31	493.56	− .04	− 405	6155	5750	496.34	.15	1518	6873	8391
Sept. 1-10	493.40	− .16	− 1780	6220	4440	496.36	.02	222	7465	7687
11-20	493.29	− .11	− 1224	5682	4458	496.20	− .16	− 1780	7528	5748
21-30	493.20	− .09	− 1001	5276	4275	496.28	.08	890	.7110	8000
Oct. 1-10	493.20	0	0	4964	4964	496.26	− .02	− 222	6958	6736
11-20	493.12	− .08	− 890	5071	4181	496.17	− .09	− 1001	6929	5928
21-31	492.90	− .22	− 2226	4882	2656	496.04	− .13	− 1316	6767	5451
Nov. 1-10	492.80	− .10	− 1113	4714	3601	495.90	− .14	− 1558	6797	5239
11-20	492.74	− .06	− 667	4712	4045	495.65	− .25	− 2782	6629	3847
21-30	492.58	− .16	− 1780	5505	3725	495.45	− .20	− 2225	6754	4528
Dec. 1-10	492.46	− .12	− 1335	5429	4094	495.22	− .23	− 2560	6433	3873
11-20	492.29	− .17	− 1892	5365	3473	495.00	− .22	− 2448	6662	4214
21-31	492.12	− .17	− 1720	4787	3067	494.81	− .19	− 1923	5790	3867

Lake levels refer to elevations on the 1st, 11th, and 21st of each month.

TABLE 76—Continued
STORAGE, OUTFLOW, AND INFLOW—RAINY LAKE

Date	1913 Lake Level	1913 Change in Storage Feet Depth	1913 Change in Storage Rate c. f. s.	1913 Outflow Rate c. f. s.	1913 Inflow Rate c. f. s.	1914 Lake Level	1914 Change in Storage Feet Depth	1914 Change in Storage Rate c. f. s.	1914 Outflow Rate c. f. s.	1914 Inflow Rate c. f. s.
Jan. 1-10	494.59	−0.22	−2448	6607	4159	*495.75	−0.20	−2226	6517	4291
11-20	494.31	− .28	−3116	6455	3339	495.48	− .27	−3005	6725	3720
21-31	493.98	− .33	−3340	6783	3443	†495.20	− .28	−2834	6897	4063
Feb. 1-10	493.62	− .36	−4007	6486	2479	494.92	− .28	−3116	6783	3667
11-20	493.23	− .39	−4341	6606	2265	*490.60	− .32	−3561	6884	3323
21-28	493.00	− .23	−3200	6599	3399	494.38	− .22	−3060	6925	3865
Mar. 1-10	492.63	− .37	−4118	6392	2274	493.97	− .41	−4564	6651	2087
11-20	492.30	− .33	−3673	6506	2833	493.56	− .41	−4564	6799	2235
21-31	491.95	− .35	−3542	6360	2818	493.17	− .39	−3947	6673	2726
Apr. 1-10	491.65	− .30	−3339	6191	2852	492.75	− .42	−4675	6777	2102
11-20	491.84	.19	2114	6402	8516	492.75	0	0	6586	6586
21-30	492.15	.31	3450	6522	9972	492.90	.15	1669	6717	8386
May 1-10	492.56	.41	4564	6695	11259	493.38	.48	5343	6581	11924
11-20	493.20	.64	7124	6490	13614	493.95	.57	6346	6650	12996
21-31	494.45	1.25	12050	6669	10319	494.70	.75	7590	7326	14916
June 1-10	495.76	1.31	14583	6557	21140	495.40	.70	7792	8514	16306
11-20	496.63	.87	9685	7057	16742	496.10	.70	7792	8494	16286
21-30	497.12	.49	5455	8216	13671	496.85	.75	8348	8382	16730
July 1-10	*497.40	.28	3116	10853	13969	497.40	.55	6122	8778	14900
11-20	497.37	− .03	− 333	14011	13678	497.60	.20	2226	10539	12765
21-31	497.35	− .02	− 202	12904	12702	497.40	− .20	−2024	11930	9906
Aug. 1-10	497.37	.02	222	9398	9620	497.30	− .10	−1113	10039	8926
11-20	*497.30	− .07	− 779	8973	8194	497.05	− .25	−2782	10284	7502
21-31	497.34	.04	405	7353	7758	496.80	− .25	−2530	9831	7301
Sept. 1-10	497.32	− .02	− 222	6622	6400	496.70	− .10	−1113	9490	8377
11-20	497.12	− .20	−2226	6869	4643	496.70	0	0	9846	9846
21-30	496.95	− .17	−1892	6820	4928	496.80	.10	1113	9910	11023
Oct. 1-10	496.99	.04	445	6602	7047	496.80	0	0	9910	9910
11-20	496.95	− .04	− 445	6500	6055	496.70	− .10	−1113	9195	8082
21-31	496.76	− .19	−1923	5986	4063	*496.60	− .10	−1012	10213	9201
Nov. 1-10	496.76	0	0	5838	5838	496.30	− .30	−3339	9877	6538
11-20	496.65	− .11	−1224	5956	4732	495.95	− .35	−3895	10173	6278
21-30	496.59	− .06	− 667	6493	5826	495.65	− .30	−3339	9729	6390
Dec. 1-10	*496.37	− .22	−2448	6409	3961	495.40	− .25	−2782	10256	7474
11-20	*496.20	− .17	−1892	6808	4916	495.05	− .35	−3895	9323	5428
21-31	*495.95	− .25	−2530	5747	3217	494.80	− .25	−2530	7547	5017

Date.	1915				
Jan. 1-10	494.40	−0.40	−4453	9424	4971
11-20	493.90	−0.50	−5566	9512	3946
21-31	493.40	−0.50	−5060	8828	3768
Feb. 1-10	493.00	−0.40	−4453	7875	3422
11-20	492.60	−0.40	−4453	7874	3421
21-28	492.20	−0.40	−5566	7741	2175
Mar. 1-10	491.80	−0.40	−4453	7555	3102
11-20	491.40	−0.40	−4453	7138	2685
21-31	490.90	−0.50	−5060	7374	2314
Apr. 1-10	490.70	−0.20	−2226	7575	5349
11-20	490.80	0.10	1113	7207	8320
21-30	491.00	0.20	2226	7725	9951
May 1-10	491.30	0.30	3339	7592	10931
11-20	491.50	0.20	2226	8714	10940
21-31	491.70	0.20	2024	7173	9197
June 1-10	492.15	0.45	5009	7388	12397
11-20	493.25	1.10	12245	7297	19542
21-30	494.30	1.05	11688	7324	19012
July 1-10	494.90	0.60	6679	7431	14110
11-20	495.35	0.45	5009	8491	13500
21-31	495.80	0.45	4554	8994	13548
Aug. 1-10	495.95	0.15	1669	9429	11098
11-20	496.00	0.05	556	8958	9514
21-31	496.00	0	0	7935	7935
Sept. 1-10	496.00	0	0	7107	7107
11-20	496.00	0	0	7416	7416
21-30	496.05	0.05	556	8004	8560
Oct. 1-10	496.00	−0.05	− 556	7563	7007
11-20	496.05	0.05	556	6708	7264
21-31	496.20	0.15	1518	6704	8222
Nov. 1-10	496.60	0.40	4453	7019	11472
11-20	496.90	0.30	3339	6777	10116
21-30	497.05	0.15	1669	6950	8619
Dec. 1-10	497.15	0.10	1113	8591	9704
11-20	497.15	0	0	9019	9019
21-31	497.15	0	0	8752	8752

* Estimated.
† Observed Rainy Lake levels taken at Ranier are low from Jan. 25, 1914, to May 18, 1915, and have been corrected in this table. See description of Ranier gauge with reason for discrepancy, text, page 90.
Lake levels refer to elevations on the 1st, 11th, and 21st of each month.

TABLE 77

SUMMARY OF LAKE LEVELS, OUTFLOW AND INFLOW, RAINY LAKE

[Watershed Area 14,500 Square Miles]

Date	Lake Levels			Outflow	Inflow		Lake Levels			Outflow	Inflow	
	Estimated Natural Level			Estimated Natural Outflow Av. c. f. s.	Estimated Natural Inflow Av. c. f. s.	Inches Depth on Drainage Area	Estimated Natural Level			Estimated Natural Outflow Av. c. f. s.	Estimated Natural Inflow Av. c. f. s.	Inches Depth on Drainage Area
	Mean for Month	Change in Level					Mean for Month	Change in Level				
		Rise Feet	Fall Feet					Rise Feet	Fall Feet			
	1892						1893					
Jan.	.....	.....	.....	.....	.....	.....	490.10	.....	1.0	7000	3409	0.27
Feb.	.....	.....	.....	.....	.....	.....	489.40	.....	0.6	5900	3515	0.25
Mar.	.....	.....	.....	.....	.....	.....	488.90	.....	0.4	5100	3664	0.29
Apr.	.....	.....	.....	.....	.....	.....	489.50	2.1	.....	6000	13793	1.06
May	.....	.....	.....	.....	.....	.....	492.50	2.9	.....	12300	22714	1.81
June	.....	.....	.....	.....	.....	.....	493.90	0.6	.....	15600	17826	1.37
July	.....	.....	.....	.....	.....	.....	494.00	.....	0.6	15800	13646	1.09
Aug.	.....	.....	.....	.....	.....	.....	492.80	.....	1.2	13000	8691	0.69
Sept.	.....	.....	.....	.....	.....	.....	491.60	.....	1.5	10300	4734	0.36
Oct.	494.20	.....	1.3	16200	11532	0.92	490.20	.....	1.3	7200	2532	0.20
Nov.	492.70	.....	1.5	12700	7134	0.55	488.80	.....	0.9	5000	1660	0.13
Dec.	491.20	.....	1.4	9300	4273	0.34	488.40	.....	0.6	4400	2246	0.18
Annual.	492.70	.....	.....	12734	7652	1.81	490.84	.....	.....	8989	8227	7.70
	1894						1895					
Jan.	487.70	.....	0.5	3700	1905	0.15	488.30	.....	0.4	4400	2964	0.24
Feb.	487.60	.....	0.3	3600	2407	0.17	488.10	.....	0.1	4100	3702	0.27
Mar.	487.50	0.2	.....	3500	4218	0.34	488.00	.....	0.1	4000	3641	0.29
Apr.	489.40	3.5	.....	5800	18787	1.45	488.70	1.7	.....	4800	11108	0.86
May	492.20	3.4	.....	11600	23809	1.89	491.20	2.8	.....	9300	19354	1.54
June	495.20	1.5	.....	18500	24066	1.85	493.50	1.8	.....	14600	21280	1.64
July	495.30	.....	1.2	18800	14491	1.16	494.20	.....	0.3	16200	15123	1.20
Aug.	493.80	.....	2.1	15300	7759	0.62	493.50	.....	1.0	14600	11009	0.88
Sept.	491.70	.....	1.8	10600	3920	0.30	492.40	.....	1.2	12000	7548	0.58
Oct.	490.10	.....	1.0	7000	3409	0.27	491.20	.....	1.0	9300	5709	0.45
Nov.	489.60	.....	0.6	6200	3974	0.31	490.50	.....	0.7	7900	5302	0.41
Dec.	488.90	.....	0.6	5100	2946	0.23	489.80	.....	0.7	6500	3986	0.32
Annual.	490.75	.....	.....	9175	9327	8.73	490.78	.....	.....	9006	9250	8.68
	1896						1897					
Jan.	488.90	.....	0.9	5100	1868	.15	491.20	.....	0.4	9300	7864	.63
Feb.	488.20	.....	0.7	4200	1512	.11	490.80	.....	0.1	8500	8102	.58
Mar.	487.70	.....	0.2	3700	2982	.24	490.60	.....	0.2	8100	7382	.59
Apr.	489.50	4.1	.....	6000	21214	1.63	491.60	2.3	.....	10300	18835	1.45
May	494.00	4.3	.....	15800	31241	2.48	493.90	2.1	.....	15600	23141	1.84
June	496.80	1.6	.....	22300	28237	2.18	496.00	1.9	.....	20600	27651	2.13
July	497.60	.....	0.1	24400	24041	1.91	496.90	.....	0.1	22600	22241	1.77
Aug.	497.10	.....	1.0	23200	19609	1.56	496.30	.....	0.8	21200	18327	1.46
Sept.	495.80	.....	1.4	20100	14905	1.15	495.50	.....	1.3	19200	14376	1.11
Oct.	494.20	.....	1.4	16200	11173	.89	493.80	.....	1.6	15300	9555	.76
Nov.	492.90	.....	1.4	13200	8005	.62	492.10	.....	1.5	11500	5934	.46
Dec.	491.60	.....	1.0	10400	6809	.54	490.60	.....	1.5	8100	2714	.22
Annual.	492.86	.....	.....	13750	14328	13.46	493.28	.....	.....	14225	13859	13.00
	1898						1899					
Jan.	489.70	.....	0.9	6300	3068	.24	492.00	.....	1.0	11200	7609	.60
Feb.	489.10	.....	0.5	5400	3412	.24	491.20	.....	1.0	9300	5330	.38
Mar.	488.50	.....	0.4	4600	3164	.25	490.30	.....	0.7	7400	4886	.39
Apr.	488.70	1.2	.....	4800	9252	.71	490.70	1.6	.....	8400	14337	1.10
May	490.10	1.2	.....	7000	11309	.90	492.60	2.4	.....	12500	21118	1.68
June	491.50	1.4	.....	10100	15195	1.17	495.00	2.1	.....	18200	25993	2.00
July	492.80	1.3	.....	13000	17668	1.40	496.20	0.3	.....	20900	21977	1.75
Aug.	493.90	1.0	.....	15600	19191	1.53	496.20	.....	0.3	20900	19823	1.58
Sept.	494.80	0.8	.....	17700	20669	1.59	495.50	.....	1.3	19200	14376	1.11
Oct.	495.00	.....	0.4	18100	16664	1.32	493.80	.....	1.5	15300	9914	.79
Nov.	494.40	.....	1.0	16800	13089	1.01	492.40	.....	1.6	12000	6063	.47
Dec.	493.20	.....	1.2	13900	9591	.76	490.90	.....	1.2	8800	4491	.36
Annual.	491.81	.....	.....	11142	11896	11.12	493.07	.....	.....	13702	13032	12.21

Outflow from Rainy Lake, corresponding water levels in Rainy Lake, and inflow into Rainy Lake, rom 1892 to 1905, are based on estimates and computations.

TABLE 77—Continued

SUMMARY OF LAKE LEVELS, OUTFLOW AND INFLOW RAINY LAKE

[Watershed area, 14,500 square miles.]

Date	Lake Levels			Outflow	Inflow		Lake Levels			Outflow	Inflow	
	Estimated Natural Level			Estimated Natural Outflow Av. c. f. s.	Estimated Natural Inflow Av. c. f. s.	Inches Depth on Drainage Area	Estimated Natural Level			Estimated Natural Outflow Av. c. f. s.	Estimated Natural Inflow Av. c. f. s.	Inches Depth on Drainage Area
	Mean for Month	Change in Level					Mean for Month	Change in Level				
		Rise Feet	Fall Feet					Rise Feet	Fall Feet			
	1900						1901					
Jan.	490.10	.....	0.8	7000	4127	0.33	495.80	.....	0.8	20000	17127	1.36
Feb.	489.30	.....	0.5	5700	3712	0.27	494.60	.....	1.4	17200	11634	0.84
Mar.	489.00	.....	0.2	5300	4582	0.36	493.20	.....	1.3	13900	9232	0.73
Apr.	489.80	2.1	.....	6500	14293	1.10	493.20	1.1	.....	13900	17892	1.38
May.	491.20	0.3	.....	9300	10377	0.82	494.20	1.3	.....	16200	20868	1.66
June.	490.80	.....	1.0	8600	4889	0.38	495.80	1.2	.....	19900	24352	1.88
July.	489.70	.....	1.2	6300	1991	0.16	495.60	.....	1.3	19500	14832	1.18
Aug.	488.50	.....	0.9	4600	1368	0.11	494.20	.....	1.7	16200	10095	0.80
Sept.	489.60	2.5	.....	6200	15477	1.19	492.40	.....	1.3	12000	7176	0.55
Oct.	492.20	3.2	.....	11600	23090	1.84	491.20	.....	1.0	9500	5909	0.47
Nov.	495.20	2.0	.....	18500	25921	2.00	490.50	.....	0.8	7900	4931	0.38
Dec.	496.00	0.2	.....	20400	21118	1.68	489.80	.....	0.7	6500	3986	0.32
Annual.	490.95	.....	.....	9187	10925	10.24	493.38	.....	.....	14379	12336	11.55
	1902						1903					
Jan.	489.00	.....	0.5	5300	3505	0.28	490.60	.....	0.3	8100	7023	0.56
Feb.	488.90	0.0	.....	5100	5100	0.37	490.30	.....	0.2	7500	6705	0.48
Mar.	488.90	0.0	.....	5100	5100	0.41	490.20	0.1	.....	7200	7559	0.60
Apr.	490.20	2.6	.....	7200	16848	1.30	491.90	3.1	.....	11000	22503	1.73
May.	492.40	2.1	.....	12100	19641	1.56	494.80	2.4	.....	17600	26218	2.08
June.	494.30	1.6	.....	16500	22437	1.73	495.80	.....	0.1	19900	19529	1.50
July.	495.20	.....	0.2	18600	17882	1.42	494.90	.....	1.5	17900	12514	1.00
Aug.	494.40	.....	1.1	16700	12750	1.01	493.60	.....	1.2	14800	10491	0.83
Sept.	493.50	.....	1.1	14600	10518	0.81	492.40	.....	1.1	12000	7918	0.61
Oct.	492.40	.....	0.8	12100	9227	0.73	491.30	.....	1.2	9700	5391	0.43
Nov.	491.60	.....	0.7	10300	7702	0.59	490.20	.....	0.8	7200	4231	0.33
Dec.	490.90	.....	0.6	8800	6646	0.53	489.80	.....	0.3	6500	5423	0.43
Annual.	491.81	.....	.....	11070	11466	10.74	492.15	.....	.....	11641	11305	10.58
	1904						1905					
Jan.	489.40	.....	0.3	5800	4723	0.38	489.50	.....	0.2	6000	5282	0.42
Feb.	489.30	.....	0.1	5700	5316	0.40	489.40	0.1	.....	5900	6298	0.45
Mar.	489.20	.....	0.1	5600	5241	0.42	489.70	0.4	.....	6300	7736	0.62
Apr.	489.40	0.5	.....	5800	7655	0.59	490.70	2.0	.....	8400	15821	1.22
May.	490.10	1.3	.....	7000	11668	0.93	492.70	1.8	.....	12800	19264	1.53
June.	491.60	1.5	.....	10300	15866	1.22	494.50	1.7	.....	16800	23108	1.78
July.	492.50	0.1	.....	12300	12659	1.01	496.00	1.0	.....	20400	23991	1.91
Aug.	492.00	.....	0.8	11100	8227	0.65	496.20	.....	0.4	20900	19464	1.55
Sept.	491.30	.....	0.9	9600	6260	0.48	495.50	.....	1.4	19200	14005	1.08
Oct.	490.50	.....	0.5	7900	6105	0.49	494.00	.....	1.6	15800	10055	0.80
Nov.	490.00	.....	0.4	6900	5416	0.42	492.63	.....	0.7	12716	10119	0.78
Dec.	489.80	.....	0.3	6500	5423	0.43	492.22	.....	0.2	11710	10992	0.87
Annual.	490.43	.....	.....	7884	7884	7.42	492.75	.....	.....	13123	13886	13.01
	1906						1907					
Jan.	491.93	.....	0.6	11068	8913	0.71	489.30	.....	0.27	5679	4709	0.37
Feb.	491.05	.....	0.9	9138	5560	0.40	489.06	.....	0.23	5327	4413	0.32
Mar.	490.30	.....	0.6	7475	5321	0.42	488.80	.....	0.30	5090	4013	0.32
Apr.	490.57	2.00	.....	7986	15407	1.19	488.67	0.13	.....	4828	5310	0.41
May.	492.75	1.50	.....	12925	18311	1.46	489.36	1.52	.....	5892	11350	0.90
June.	493.95	0.90	.....	15468	18807	1.45	491.51	2.40	.....	10137	19042	1.47
July.	494.28	.....	0.5	16545	14749	1.17	493.51	1.33	.....	14665	19441	1.55
Aug.	493.33	.....	1.2	14337	10028	0.80	494.81	1.82	.....	17611	24146	1.92
Sept.	491.97	.....	1.4	11168	5973	0.46	496.14	0.45	.....	20771	22440	1.73
Oct.	490.72	.....	1.0	8280	4690	0.37	495.97	.....	0.80	20426	17554	1.40
Nov.	489.93	.....	0.6	6710	4484	0.35	494.83	.....	1.35	17791	12782	0.98
Dec.	489.56	.....	0.25	6109	5211	0.41	493.39	.....	1.55	14347	8781	0.70
Annual.	491.70	.....	.....	10616	9807	9.19	492.11	.....	.....	11918	12878	12.07

Outflow from Rainy Lake, corresponding water levels in Rainy Lake, and inflow into Rainy Lake, from 1892 to 1905, are based on estimates and computations.

Water levels in Rainy Lake, inflow into and outflow from Rainy Lake, from 1905 to 1911, are based mainly on observed water levels above and below Falls.

TABLE 77—Continued

SUMMARY OF LAKE LEVELS, OUTFLOW AND INFLOW RAINY LAKE

[Watershed Area 14,500 Square Miles.]

Date	Lake Levels						Outflow		Inflow	
	Actual Controlled Level			Computed Natural Level			Actual Controlled Outflow Av.c.f.s.	Computed Natural Outflow Av.c.f.s.	Actual Inflow Av.c.f.s.	Inches Depth on Drainage Area
	Mean for Month	Change in Level		Mean for Month	Change in Level					
		Rise Feet	Fall Feet		Rise Feet	Fall Feet				
					1908					
Jan.				491.88		1.35		10981	6134	0.49
Feb.				490.79		0.85		8528	5266	0.39
Mar.				489.93		0.80		6799	3926	0.31
Apr.				489.71	0.45			6307	7977	0.61
May				490.50	1.00			7891	11482	0.91
June				492.05	2.00			11223	18643	1.44
July				493.77	1.00			15241	18832	1.50
Aug.				493.81		0.85		15314	12261	0.97
Sept.				492.56		1.25		12541	7903	0.61
Oct.				491.38		1.20		9815	5506	0.44
Nov.				490.19		1.05		7357	3462	0.27
Dec.				489.28		0.75		5735	3042	0.24
Annual				491.32				9823	8713	8.18
					1909					
Jan.				488.68		0.60		4905	2751	0.22
Feb.				488.07		0.50		4104	2117	0.15
Mar.	487.59		0.55	487.51		0.35	4235	3505	2260	0.18
Apr.	487.34	0.31		487.34	0.07		2463	3346	3613	0.28
May	489.40	4.20		489.03	2.96		560	5299	15642	1.24
June	493.25	2.79		491.35	2.01		6818	9743	17171	1.32
July	494.72	0.10		492.41		0.17	11214	12128	11572	0.92
Aug.	494.98	0.48		492.39	0.17		11023	12083	12746	1.01
Sept.	495.12		0.23	492.06		0.71	9520	11340	8666	0.67
Oct.	494.82		0.02	491.43		0.41	8550	9923	8478	0.67
Nov.	495.47	1.29		491.30	0.14		5377	9630	10164	0.78
Dec.	496.54	0.32		491.69	0.32		10468	10508	11616	0.92
Annual	492.92			490.27			7036	8070	8944	8.3
					1910					
Jan.	496.38		0.50	491.65		0.33	10986	10418	9191	0.73
Feb.	495.46		1.22	491.00		0.83	10514	8970	5663	0.41
Mar.	494.33		0.50	490.41	0.18		10112	7701	8318	0.66
Apr.	495.01	1.16		491.63	1.48		11568	10372	15872	1.22
May	495.40		0.21	492.19		0.26	11424	11633	10671	0.85
June	494.72		1.17	491.46		1.03	10469	9990	6128	0.47
July	493.66		0.77	490.40		1.08	6529	7680	3764	0.30
Aug.	493.04		0.61	489.46		0.81	5207	5951	3018	0.24
Sept.	492.34		0.83	488.68		0.77	5043	4814	1963	0.15
Oct.	491.48		0.89	488.02		0.47	5473	4022	2278	0.18
Nov.	490.44		1.07	487.56		0.49	5739	3552	1769	0.14
Dec.	489.47		0.87	487.00		0.58	4100	3045	976	0.08
Annual	493.48			489.96			8076	7334	5795	5.43
					1911					
Jan.	488.93		0.28	486.63		0.26	2800	2753	1795	0.14
Feb.	488.67		0.21	486.36		0.22	2505	2550	1670	0.12
Mar.	488.44		0.27	486.16		0.20	2594	2402	1625	0.13
Apr.	488.85	1.38		486.61	1.35		2600	2738	7720	0.59
May	490.25	1.21		488.05	1.40		4810	4055	9158	0.73
June	491.74	1.55		489.69	1.45		6016	6333	11767	0.91
July	492.95	0.99		490.29	0.09		4211	7455	7766	0.62
Aug.	493.58	0.13		490.30		0.25	6189	7475	6655	0.53
Sept.	493.36		0.36	489.79		0.58	5725	6507	4391	0.34
Oct.	493.12		0.30	489.32		0.53	4969	5731	3892	0.31
Nov.	492.76		0.32	488.82		0.32	4977	5003	3790	0.29
Dec.	492.37		0.46	488.55		0.30	5180	4648	3529	0.28
Annual	491.25			488.38			4392	4819	5326	4.99

Water levels in Rainy Lake, inflow into and outflow from Rainy Lake, from 1905 to 1911, are based mainly on observed water levels above and below Falls.

Water levels in Rainy Lake, inflow into and outflow from Rainy Lake, from 1911 to 1915, are based on observed values.

TABLE 77—Continued

SUMMARY OF LAKE LEVELS, OUTFLOW AND INFLOW, RAINY LAKE

[Watershed Area 14,500 Square Miles.]

Date	Lake Levels						Outflow		Inflow	
	Actual Controlled Level			Computed Natural Level			Actual Controlled Outflow Av.c.f.s.	Computed Natural Outflow Av.c.f.s.	Actual Inflow Av.c.f.s	Inches Depth on Drainage Area
	Mean for Month	Change in Level		Mean for Month	Change in Level					
		Rise Feet	Fall Feet		Rise Feet	Fall Feet				
1912										
Jan	491.76		0.76	488.17		0.43	5334	4191	2606	0.21
Feb	491.08		0.62	487.80		0.35	4828	3790	2450	0.18
Mar	490.34		0.83	487.37		0.44	4738	3373	1758	0.14
Apr	489.95	0.51		487.39	0.90		4851	3391	6744	0.52
May	491.60	2.50		489.33	2.57		6088	5747	15064	1.20
June	494.28	2.54		491.51	1.45		6016	10103	15440	1.19
July	496.01	0.92		492.03		0.07	7700	11273	11003	0.88
Aug	496.26		0.04	491.64		0.66	8120	10395	7976	0.63
Sept	496.29		0.06	491.04		0.52	7368	9058	7145	0.55
Oct	496.20		0.24	490.56		0.56	6881	8019	6019	0.48
Nov	495.77		0.59	489.94		0.62	6727	6779	4538	0.35
Dec	495.12		0.64	489.37		0.51	6280	5809	3981	0.32
Annual	493.72			489.68			6252	6838	7070	6.65
1913										
Jan	494.43		0.83	488.93		0.42	6620	5157	3640	0.29
Feb	493.45		0.98	488.43		0.46	6561	4498	2665	0.19
Mar	492.47		1.05	488.04		0.38	6417	4044	2647	0.21
Apr	491.85	0.20		488.09	0.81		6372	4099	7113	0.55
May	493.02	2.30		489.66	1.35		6620	6282	14879	1.18
June	496.06	2.67		492.12	1.57		7277	11475	17184	1.32
July	497.34	0.23		492.72	0.15		12599	12825	13426	1.07
Aug	497.34		0.01	492.31		0.94	8535	11903	8499	0.68
Sept	497.20		0.39	491.25		1.11	6770	9520	5324	0.41
Oct	496.93		0.19	490.47		0.61	6350	7827	5668	0.45
Nov	496.70		0.17	489.91		0.34	6096	6724	5465	0.42
Dec	496.28		0.64	489.48		0.55	6303	5983	4005	0.32
Annual	495.26			490.12			7222	7548	7570	7.09
***1914**										
Jan	495.60		0.75	489.02		0.35	6719	5284	4026	0.32
Feb	494.77		0.82	488.67		0.32	6859	4801	3601	0.26
Mar	493.77		1.21	488.27		0.48	6706	4306	2361	0.19
Apr	492.84		0.27	488.09	0.45		6693	4099	5691	0.44
May	493.71	1.80		489.72	2.65		6868	6385	13331	1.06
June	495.76	2.15		492.27	1.91		8463	11802	16441	1.27
July	497.37	0.55		493.18		0.02	10464	13874	12439	0.99
Aug	497.15		0.60	492.57		1.04	10044	12487	7890	0.63
Sept	496.73		0.00	491.66		0.61	9749	10440	9749	0.75
Oct	496.73		0.20	491.12		0.55	9787	9234	9069	0.72
Nov	496.12		0.95	490.50		0.65	9926	7890	6402	0.49
Dec	495.22		0.85	489.97		0.49	8994	6835	5942	0.47
Annual	495.48			490.42			8449	8142	8099	7.59
***1915**										
Jan	494.13		1.40	489.44		0.56	9241	5919	4213	0.34
Feb	492.80		1.20	488.87		0.53	7836	5073	3065	0.22
Mar	491.58		1.30	488.35		0.52	7356	4400	2688	0.21
Apr	490.82	0.10		488.16	0.21		7502	4179	7873	0.61
May	491.38	0.70		488.73	0.91		7805	4880	10319	0.82
June	492.80	2.60		490.31	2.67		7336	7496	16984	1.31
July	495.10	1.50		492.91	1.67		8327	13253	13714	1.09
Aug	495.95	0.20		493.18		1.00	8747	13874	9465	0.75
Sept	496.01	0.05		491.83		1.31	7509	10823	7694	0.59
Oct	496.06	0.15		490.85		0.74	6983	8642	7521	0.60
Nov	496.71	0.85		490.55	0.08		6915	7998	10069	0.78
Dec	497.13	0.10		490.65	0.08		8786	8213	9145	0.73
Annual	494.21			490.32			7868	7922	8584	8.05
Average for period	†493.78			‡490.92			†7042	‡10042	‡9996	9.37

*The inflow into Rainy Lake during 1914 and 1915 was partly controlled as a result of the construction of storage dams at Kettle Falls.

†Average from March 1, 1909 to December 31, 1915.

‡Average from October 1, 1892 to December 31, 1915.

NOTE: Water levels in Rainy Lake, inflow into and outflow from Rainy Lake, from 1911 to 1915, are based on observed values.

TABLE 78

SUMMARY OF INFLOW INTO THE LAKE OF THE WOODS FROM WATERSHED BELOW RAINY LAKE

[Area 12,250 Square Miles]

Date	Average Rate Cu. Ft. per Sec.	Inches Depth on Drainage Area	Average Rate Cu. Ft. per Sec.	Inches Depth on Drainage Area	Average Rate Cu. Ft. per Sec.	Inches Depth on Drainage Area	Average Rate Cu. Ft. per Sec.	Inches Depth on Drainage Area	Average Rate Cu. Ft. per Sec.	Inches Depth on Drainage Area	Average Rate Cu. Ft. per Sec.	Inches Depth on Drainage Area
	1892		1893		1894		1895		1896		1897	
Jan.			1415	0.13	2191	0.21	1047	0.10	1261	0.12	2815	0.27
Feb.			1182	0.10	1195	0.10	1751	0.15	771	0.07	1756	0.15
Mar.			2514	0.24	1138	0.11	− 7	−0.00	2307	0.22	4025	0.38
Apr.			9497	0.86	20337	1.85	9189	0.84	29610	2.70	38109	3.47
May			27131	2.55	31344	2.95	9567	0.90	43819	4.13	23664	2.23
June			17692	1.61	19807	1.81	22749	2.07	32752	2.98	21459	1.95
July			13157	1.24	7423	0.70	8979	0.85	8356	0.79	24486	2.31
Aug.			2634	0.25	− 423	−0.04	2125	0.20	3474	0.33	9525	0.90
Sept.			−2072	−0.19	−2991	−0.27	− 656	−0.06	− 981	−0.09	3584	0.33
Oct.	7175	0.68	− 912	−0.09	3757	0.35	− 43	−0.00	−2143	−0.20	71	0.01
Nov.	2603	0.24	22	0.00	2112	0.19	1439	0.13	5028	0.46	− 686	−0.06
Dec.	2819	0.27	2098	0.20	1089	0.10	649	0.06	5073	0.48	− 531	−0.05
Annual	4216	1.19	6237	6.90	7270	8.06	4719	5.24	10754	11.99	10709	11.89
	1898		1899		1900		1901		1902		1903	
Jan.	3236	0.30	2518	0.24	6389	0.60	8023	0.76	1638	0.15	2477	0.23
Feb.	1770	0.15	− 92	−0.01	1577	0.13	2245	0.19	904	0.08	1756	0.15
Mar.	318	0.03	1786	0.17	1516	0.14	−1137	−0.11	5519	0.52	4611	0.43
Apr.	2989	0.27	10424	0.95	5465	0.50	17883	1.63	5766	0.53	21061	1.92
May	7156	0.67	30435	2.87	−2591	−0.24	5814	0.55	19596	1.84	20738	1.95
June	18815	1.71	30881	2.81	−1991	−0.18	11379	1.04	12111	1.10	4786	0.44
July	17880	1.68	23553	2.22	317	0.03	7448	0.70	11927	1.12	4889	0.46
Aug.	9445	0.89	11112	1.05	8358	0.79	2775	0.26	2598	0.24	162	0.02
Sept.	8303	0.76	1923	0.18	39678	3.62	−5335	−0.49	− 626	−0.06	565	0.05
Oct.	5205	0.49	2517	0.24	28739	2.81	−1377	−0.13	987	0.09	8129	0.77
Nov.	3382	0.31	518	0.05	26678	2.43	− 887	−0.08	1860	0.17	124	0.01
Dec.	1425	0.13	2942	0.28	14406	1.36	319	0.03	2205	0.21	874	0.08
Annual	6682	7.39	9947	11.05	10713	11.99	3923	4.35	5417	5.99	5872	6.51
	1904		1905		1906		1907		1908		1909	
Jan.	1300	0.12	3155	0.30	1088	0.10	2143	0.20	2658	0.25	2614	0.25
Feb.	1940	0.17	3154	0.27	2373	0.20	2478	0.21	4668	0.41	643	0.05
Mar.	3836	0.36	2753	0.26	− 903	−0.08	3014	0.28	4313	0.41	2123	0.20
Apr.	12953	1.18	7188	0.65	19293	1.76	5927	0.54	13063	1.19	1917	0.17
May	22836	2.15	17537	1.65	11657	1.10	16393	1.54	18684	1.76	20273	1.91
June	13523	1.23	15443	1.41	13085	1.19	11013	1.00	16535	1.51	8222	0.75
July	7458	0.70	21933	2.07	3764	0.35	3285	0.31	4134	0.39	2315	0.22
Aug.	280	0.03	18929	1.78	480	0.05	5499	0.52	2623	0.25	1263	0.12
Sept.	− 368	−0.03	11776	1.07	−1798	−0.16	11202	1.02	2758	0.25	1318	0.12
Oct.	− 670	−0.06	5480	0.52	− 808	−0.08	3202	0.30	− 954	−0.09	3866	0.36
Nov.	1630	0.15	5324	0.49	2178	0.20	1702	0.16	2050	0.19	6671	0.61
Dec.	1029	0.10	3460	0.33	2264	0.21	2190	0.21	3823	0.36	5560	0.52
Annual	5482	6.10	9728	10.80	4364	4.84	5677	6.29	6178	6.88	4767	5.28
	1910		1911		1912		1913		1914		1915	
Jan.	1843	0.17	2031	0.19	2346	0.22	975	0.09	1075	0.10	498	0.01
Feb.	1132	0.10	1568	0.13	1644	0.14	1413	0.12	1190	0.10	1792	0.15
Mar.	7306	0.69	1320	0.12	2463	0.23	1935	0.18	998	0.09	904	0.09
Apr.	19308	1.76	5606	0.51	7654	0.70	11492	1.05	8623	0.79	9765	0.89
May	7055	0.66	5915	0.56	13249	1.25	11236	1.06	16279	1.53	13062	1.23
June	2578	0.23	4364	0.40	2865	0.26	7710	0.70	13753	1.25	22140	2.01
July	−3406	−0.32	−2557	−0.24	4162	0.39	5405	0.51	7393	0.70	10399	0.98
Aug.	−4183	−0.39	− 129	−0.01	2997	0.28	1312	0.12	−3023	−0.28	− 180	−0.02
Sept.	−1624	−0.15	1543	0.14	11538	1.05	−3447	−0.31	4982	0.45	− 472	−0.04
Oct.	−2150	−0.20	1564	0.15	7845	0.74	2725	0.26	5441	0.51	1093	0.10
Nov.	− 452	−0.04	302	0.03	1433	0.13	1468	0.13	618	.06	3387	0.31
Dec.	1034	0.10	1661	0.16	1475	0.14	1053	0.10	937	.09	1645	0.15
Annual	2351	2.61	1924	2.14	4980	5.53	3616	4.01	4862	5.39	5328	5.86

Average Rate of Inflow for Entire Period.....6132 Cu. Ft. per Sec.
Average Total Annual Inflow.....6.81 Inches Depth on Drainage Area.

NOTE.

The above rates of inflow are equal to the difference between the monthly mean inflow into the Lake of the Woods and the monthly mean outflow from Rainy Lake.

The inflow between 1892 and 1905 is based on the observed monthly mean inflow into the Lake of the Woods and the estimated monthly mean outflow from Rainy Lake.

The inflow between 1905 and 1911 is based on the observed monthly mean inflow into the Lake of the Woods and the monthly mean outflow from Rainy Lake, as computed from observed water levels above and below the Falls.

From 1911 to 1915 the inflow is based entirely on observed values.

TABLE 79

DAILY DISCHARGE—LITTLE FORK RIVER—LITTLE FORK, MINN.

RECORDS OF UNITED STATES GEOLOGICAL SURVEY

Cubic Feet Per Second

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1909												
1							240	247	1030	708	1360	
2							237	224	900	634	1240	
3							224	208	757	614	1170	
4							208	215	667	518	1090	
5							199	237	940	463	980	
6							193	291	512	393	932	
7							184	304	440	371	864	
8							184	502	405	344	802	
9							178	852	371	347	621	
10							166	896	330	377	680	
11							148	1650	291	422	750	
12							137	3760	286	472	694	
13							141	4120	266	487	598	
14							166	4380	266	487		
15							160	4240	254	518		
16							160	3980	247	598		
17							156	3650	242	630		
18							164	3120	228	687		
19							189	2070	237	698		
20							193	1860	247	778		
21							193	1260	268	1230		
22							197	1080	288	2010		
23						377	193	932	366	2340		
24						360	184	908	382	2700		
25						333	252	908	640	2700		
26						307	294	868	920	2560		
27						296	307	852	988	2410		
28						281	347	868	988	2180		
29						268	358	1050	920	1860		
30						261	328	1080	802	1600		
31							286	1140		1490		
Monthly Mean Discharge, Cu. Ft. per Sec.							212	1540	516	1080		
Inches Depth on Drainage Area							0.15	1.07	0.35	0.75		
1910												
1					1390	565	201	271	91	119	176	
2					1290	512	186	215	92	176	158	
3					1190	457	146	180	96	197	172	
4					1080	457	105	172	79	208	176	
5					1000	472	123	172	40	197	197	
6					900	457	110	156	72	197		
7					816	472	86	128	79	176		
8					768	518	83	119	92	176		
9					732	502	75	119	86	166		
10					650	442	79	110	94	152		
11				2200	578	411	112	94	94	137		
12				1940	581	358	119	110	96	137		
13				1750	546	344	119	110	102	152		
14				1600	512	330	99	102	99	146		
15				1490	487	278	123	116	86	137		
16				1720	457	247	123	110	73	128		
17				2310	442	237	146	105	72	119		
18				4580	457	228	156	110	86	119		
19				5000	454	210	102	116	83	193		
20				4770	451	193	102	116	80	156		
21				4610	524	172	99	112	102	160		
22				4200	575	158	137	110	112	156		
23				3430	647	148	146	107	100	154		
24				2870	680	137	123	110	86	156		
25				2510	698	126	123	110	86	176		
26				2280	647	119	133	110	86	176		
27				2040	647	112	133	110	86	176		
28				1860	647	112	304	96	86	176		
29				1690	680	242	371	94	96	176		
30				1490	667	266	358	91	119	176		
31					588		304	91		176		
Monthly Mean Discharge, Cu. Ft. per Sc.					703	309	149	125	88	163	*160	
Inches Depth on Drainage Area					0.49	0.21	0.10	0.09	0.06	0.11	0.11	

* Monthly Mean estimated.

TABLE 79—Continued

DAILY DISCHARGE—LITTLE FORK RIVER—LITTLE FORK, MINN.

RECORDS OF UNITED STATES GEOLOGICAL SURVEY

Cubic Feet Per Second

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1911												
1	.....	.....	.....	900	1540	1190	363	665	458	395	289	.....
2	.....	.....	.....	1000	1480	1540	365	793	429	398	289	.....
3	.....	.....	.....	1150	1410	1770	312	738	354	412	289	.....
4	.....	.....	.....	1400	1300	1950	269	705	325	438	289	.....
5	.....	.....	.....	1400	1150	2260	252	690	368	482	289	.....
6	.....	.....	.....	1450	989	2320	245	630	438	479	289	.....
7	.....	.....	.....	1500	890	2610	235	630	529	452	289	.....
8	.....	.....	.....	1570	793	2260	216	701	756	438	289	.....
9	.....	.....	.....	1400	774	2460	198	665	811	409	289	.....
10	.....	.....	.....	1320	719	2540	186	605	909	390	.....	.....
11	.....	.....	.....	1310	793	2540	182	562	917	354	.....	.....
12	.....	.....	.....	1790	850	2530	173	438	909	328	.....	.....
13	.....	.....	.....	1800	862	2330	163	485	870	328	.....	.....
14	.....	.....	.....	1850	890	2520	154	510	831	320	.....	.....
15	.....	.....	.....	1950	901	2510	150	513	756	315	.....	.....
16	.....	.....	.....	3000	905	2500	150	458	701	320	.....	.....
17	.....	.....	.....	3400	862	2500	150	429	578	341	.....	.....
18	.....	.....	.....	3730	1010	1920	150	423	482	341	.....	.....
19	.....	.....	.....	3580	1230	1780	148	373	482	368	.....	.....
20	.....	.....	.....	3370	1170	1480	148	331	452	368	.....	.....
21	.....	.....	.....	3160	1110	1190	150	289	429	368	.....	.....
22	.....	.....	.....	3160	1230	993	150	328	368	354	.....	.....
23	.....	.....	.....	2980	1320	811	142	289	328	341	.....	.....
24	.....	.....	.....	2760	1250	679	150	276	315	328	.....	.....
25	.....	.....	.....	2530	909	647	158	274	328	289	.....	.....
26	.....	.....	.....	2240	909	581	160	331	302	289	.....	.....
27	.....	.....	.....	2050	1010	476	191	382	289	284	.....	.....
28	.....	.....	.....	1900	1590	443	250	458	315	269	.....	.....
29	.....	.....	.....	1720	1540	406	259	426	438	264	.....	.....
30	.....	.....	.....	1630	1190	390	240	423	409	279	.....	.....
31	.....	.....	.....	.....	1030	.....	513	423	.....	289	.....	.....
Monthly Mean Discharge, Cu. Ft. per Sec.	.....	.....	.....	2100	1080	1680	212	492	529	356	*209	*145
Inches Depth on Drainage Area	.....	.....	.....	1.41	0.75	1.13	0.15	0.34	0.36	0.25	0.14	0.10
1912												
1	.....	.....	.....	.....	2000	910	395	160	289	1030	341	180
2	.....	.....	.....	.....	2040	970	756	140	302	989	341	180
3	.....	.....	.....	.....	2080	1030	719	150	289	870	341	180
4	.....	.....	.....	.....	2180	793	513	130	276	793	341	180
5	.....	.....	.....	.....	2660	793	423	112	1360	719	341	180
6	.....	.....	.....	.....	2710	793	341	130	1110	683	341	180
7	.....	.....	.....	.....	3060	831	341	130	1320	683	341	180
8	.....	.....	.....	.....	3210	756	368	130	1280	578	341	180
9	.....	.....	.....	.....	3110	793	341	130	1320	513	341	180
10	.....	.....	.....	.....	3160	719	341	130	1280	578	341	180
11	.....	.....	.....	.....	3110	395	289	130	1190	578	341	180
12	.....	.....	.....	.....	3160	482	289	130	870	545	328	180
13	.....	.....	.....	2130	3310	545	289	130	949	578	328	180
14	.....	.....	.....	1900	3260	578	368	112	831	513	315	180
15	.....	.....	.....	1820	2910	545	341	112	719	545	315	180
16	.....	.....	.....	1590	3160	513	264	97	647	545	315	180
17	.....	.....	.....	1410	2910	482	240	112	578	513	300	180
18	.....	.....	.....	1460	2660	482	240	121	513	482	300	180
19	.....	.....	.....	1360	2360	513	216	130	395	452	300	105
20	.....	.....	.....	1320	2360	545	193	130	315	452	300	105
21	64	.....	.....	1230	2130	612	204	130	315	395	300	105
22	.....	.....	.....	1190	1860	578	193	130	341	423	300	105
23	.....	.....	.....	1070	1720	513	193	130	423	423	300	105
24	.....	.....	.....	793	1500	482	193	130	513	395	300	105
25	.....	.....	.....	719	1190	423	193	130	612	368	300	105
26	.....	73	.....	909	1410	395	193	130	719	368	300	105
27	.....	.....	.....	1540	1230	341	204	130	756	328	300	105
28	.....	.....	.....	1860	1190	289	193	150	909	289	300	105
29	.....	.....	.....	1900	1070	264	193	216	989	368	300	105
30	.....	.....	67	1950	793	264	193	264	647	368	300	105
31	.....	.....	.....	.....	850	.....	193	264	.....	341	.....	105
Monthly Mean Discharge, Cu. Ft. per Sec.	*85	*75	*70	*1130	2270	588	304	140	735	539	318	149
Inches Depth on Drainage Area	0.06	0.05	0.05	0.76	1.58	0.40	0.21	0.10	0.50	0.37	0.21	0.10

*Monthly Mean estimated.

Daily discharges based on a well defined rating curve. Discharge estimated April 1 to 7, 1911, owing to ice, and April 12 to 20 and June 10 to 17, 1911, and April 29 to May 2, May 15 to 25, owing to backwater from log jams. From July 13 to August 31, 1912, the discharge has been reduced on account of backwater from floating logs.

From November 17, 1912, to April 17, 1913, the discharge was estimated from discharge measurements, observers' reports, and climatological records.

*TABLE 79—Continued

DAILY DISCHARGE—LITTLE FORK RIVER—LITTLE FORK, MINN.

RECORDS OF UNITED STATES GEOLOGICAL SURVEY

Cubic Feet Per Second

1913	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	90	60	85	100	3540	3490	1060	482	289	423	612	1680
2	90	60	85	100	3060	3540	1280	368	289	452	452	1680
3	90	60	85	100	3010	3320	1190	276	315	482	368	1680
4	90	60	85	100	3220	3060	1070	240	341	909	264	1680
5	90	60	85	100	3490	2760	1360	264	341	1070	264	950
6	90	60	85	100	3490	3060	1540	264	368	1280	315	950
7	90	60	85	100	3380	4040	1630	276	395	1540	300	950
8	90	60	85	100	2960	4810	1540	289	423	1820	300	950
9	90	60	85	100	2860	4760	1280	302	423	2080	300	950
10	90	60	85	1500	2560	4100	989	289	513	2180	300	950
11	90	60	85	1500	2180	3490	870	315	578	2260	300	950
12	90	60	85	1500	2080	3270	1030	315	719	2180	300	950
13	90	60	85	1500	2000	2760	1640	315	647	2130	300	950
14	90	60	85	1500	1900	2360	1680	315	612	1950	300	950
15	75	60	85	1500	2000	1820	1640	315	578	1680	300	950
16	75	60	85	1500	2180	1640	1640	302	612	1410	300	280
17	75	60	85	5360	3600	1770	1720	302	578	1280	300	280
18	75	55	85	4920	5250	1640	1860	276	578	1150	300	280
19	75	55	85	4700	5080	1640	1900	264	513	1030	300	280
20	75	55	85	4480	4860	1460	1720	252	482	1030	300	280
21	75	55	85	3930	3710	1460	1640	289	452	909	930	280
22	75	55	85	3760	3820	1410	1590	395	452	719	930	280
23	75	55	85	3880	4200	1280	1540	341	452	719	930	280
24	75	55	85	3930	4150	1110	1460	328	423	756	930	280
25	75	55	85	4100	3760	949	1320	315	423	870	930	280
26	75	55	85	4810	3110	949	1110	328	423	949	930	280
27	75	55	85	5250	2610	870	870	315	423	1030	930	280
28	75	55	85	5080	2260	1070	719	315	423	1150	930	280
29	75	.....	85	4590	2410	1190	647	315	423	1110	930	280
30	75	.....	85	4040	2760	1280	578	315	423	949	930	280
31	75	.....	85	.....	3220	.....	545	289	.....	793	.....	280
Monthly Mean Discharge, Cu. Ft. per Sec.	82	58	85	2470	3180	2350	1320	309	464	1240	526	698
Inches Depth on Drainage Area	0.06	0.04	0.06	1.66	2.21	1.58	0.92	0.22	0.31	0.86	0.35	0.49
1914												
1	150	112	78	383	4760	1540	1360	482	578	395	513	230
2	150	112	78	383	5340	1410	1540	395	545	368	513	230
3	150	112	78	383	5930	1320	1720	368	545	341	513	230
4	150	112	78	383	6520	1280	1860	341	578	341	545	230
5	150	112	78	383	6300	1150	1820	302	647	315	545	230
6	150	97	78	383	6460	989	1460	289	719	328	578	230
7	150	97	78	383	6020	831	1110	240	756	395	578	230
8	150	97	78	383	5520	793	909	216	683	452	578	230
9	150	86	78	383	4920	3270	870	264	647	452	545	230
10	150	86	78	383	4590	4260	949	264	612	482	545	230
11	150	86	78	383	4150	4040	1030	289	578	513	482	230
12	150	86	86	383	3710	3440	1190	315	578	545	452	230
13	150	86	86	383	3380	2860	4150	341	482	578	452	230
14	150	86	86	383	3060	2360	5250	315	452	578	452	230
15	150	86	86	383	2710	2040	5080	276	513	647	452	230
16	115	86	86	383	2460	1900	4700	264	683	612	423	230
17	115	86	86	2260	2260	1720	4150	289	831	578	423	230
18	115	86	114	2260	2000	1540	3710	315	831	545	423	230
19	115	78	114	2260	2040	1680	3220	341	870	513	423	230
20	115	78	114	2260	2180	1280	2760	368	870	513	452	230
21	115	78	114	2260	2460	949	2360	423	949	482	452	230
22	115	78	114	2260	2910	793	1900	513	1030	482	452	230
23	115	78	114	2260	3160	578	1460	545	1110	482	423	230
24	115	78	114	2260	2860	452	989	578	1110	578	423	230
25	115	78	114	3060	2410	341	683	647	1030	612	452	230
26	115	78	114	2860	2080	452	793	647	870	647	452	230
27	115	78	114	2710	2310	578	719	612	719	647	452	230
28	115	78	114	2860	1900	793	545	578	647	612	452	230
29	115	.....	114	3540	1950	949	452	578	545	612	452	230
30	115	.....	114	4150	1820	1280	395	578	452	578	452	230
31	115	.....	114	.....	1680	.....	423	612	.....	545	.....	230
Monthly Mean Discharge, Cu. Ft. per Sec.	132	89	96	1450	3540	1560	1920	406	715	509	478	230
Inches Depth on Drainage Area	0.09	0.06	0.07	0.98	2.46	1.05	1.34	0.28	0.48	0.35	0.32	0.16

NOTE.—From November 7 to 30, 1913, from Dec. 5, 1913, to April 25, 1914, and from December 1 to 31, 1914, the discharge was estimated from discharge measurements, observers reports, and climatological records.

* For 1915 records see page 329.

TABLE 80

DAILY DISCHARGE—BIG FORK RIVER—BIG FALLS, MINN.

RECORDS OF UNITED STATES GEOLOGICAL SURVEY

Cubic Feet Per Second

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1909												
1									812	536	1140	
2									731	492	1070	
3									628	470	1000	
4									574	465	955	
5									530	460	918	
6									481	460	854	
7									465	445	805	
8									415	445	770	
9									400	470	770	
10									375	552	738	
11									366	679	712	
12									348	784	628	
13									360	840	580	
14									360	840	552	
15									375	840	525	
16									385	875		
17									395	910		
18									375	910		
19									430	948		
20									470	1100		
21									514	1340		
22									616	1820		
23									738	2140		
24									784	2140		
25									777	2100		
26									718	1960		
27								978	653	1780		
28								1040	604	1600		
29								1110	580	1430		
30								1060	552	1310		
31								948		1210		
Monthly Mean Discharge, Cu. Ft. per Sec.									527	1040	*660	
Inches Depth on Drainage Area									0.39	0.81	0.49	
1910												
1				2960	2390	1030	281	108	48	196	293	
2				3200	2320	1000	249	95	40	206	277	
3				3300	2070	948	231	86	72	227	242	
4				3260	2420	854	224	98	77	214	217	
5				2860	2180	970	203	86	100	189	206	
6				2880	2140	1080	238	72	110	175	182	
7				3000	2200	1050	214	61	98	163	163	
8				2940	2110	970	196	50	86	172	151	
9				2920	2020	903	175	48	84	179	130	
10				2660	1960	854	163	40	105	192	100	
11				2490	1730	777	253	42	108	203	94	
12				2330	1490	764	228	72	98	227	74	
13				2260	1280	882	203	86	93	253		
14				2170	1110	847	182	77	115	285		
15				2200	1000	777	148	70	108	334		
16				2380	1240	738	120	63	100	329		
17				3500	1540	705	105	59	98	321		
18				4310	1690	779	86	50	115	305		
19				4790	1750	646	72	42	105	347		
20				4730	1620	586	61	38	98	410		
21				4690	1510	503	61	86	93	425		
22				4280	1450	610	59	74	110	415		
23				3660	1570	525	82	59	120	395		
24				3380	1500	465	105	46	115	380		
25				3060	1440	425	108	70	105	366		
26				2640	1380	400	95	52	110	366		
27				2470	1340	375	84	34	122	400		
28				2360	1260	343	110	72	148	395		
29				2230	1170	325	110	72	172	375		
30				2360	1120	301	98	63	192	366		
31					1070		120	52		329		
Monthly Mean Discharge, Cu. Ft. per Sec.				3080	1650	714	150	65	105	295		
Inches Depth on Drainage Area				2.31	1.28	0.53	0.12	0.05	0.08	0.23		

* Monthly Mean partly estimated.

NOTE.—Daily discharge computed from a rating curve not well defined.

TABLE 81

DAILY DISCHARGE—VERMILION RIVER—OUTLET LAKE VERMILION, MINN.

RECORDS OF UNITED STATES GEOLOGICAL SURVEY

Cubic Feet Per Second.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1911												
1						490	490	272	167	158	132	130
2						490	466	272	167	158	127	130
3						515	442	266	167	156	124	130
4						490	420	266	167	156	120	130
5						490	411	263	167	158	117	130
6						490	407	263	187	158	114	130
7						490	402	266	321	158	114	130
8						515	358	263	321	156	114	130
9						515	358	263	321	156	114	130
10						568	321	260	257	156	114	130
11						556	304	260	231	156	114	130
12						546	287	257	208	158	114	130
13						540	272	257	208	156	114	130
14						540	266	244	208	156	114	130
15						540	257	244	208	156	114	130
16						515	272	231	208	156	114	130
17					515	500	272	231	187	158	117	130
18					540	495	257	231	187	159	119	130
19					595	490	257	244	183	159	122	130
20					540	622	231	244	179	158	127	130
21					515	595	208	244	175	156	130	130
22					540	568	257	236	167	154	130	130
23					568	568	257	231	167	152	130	130
24					540	540	257	208	167	148	130	130
25					515	540	257	208	167	144	130	130
26					490	515	272	187	167	141	130	130
27					490	515	272	187	167	137	130	130
28					490	490	272	187	163	134	130	130
29					490	490	263	187	159	132	130	130
30					490	490	263	167	158	130	130	130
31					515	.....	263	167	.....	130	.....	130
Monthly Mean Discharge, Cu. Ft. per Sec.					522	524	309	236	197	152	122	130
Inches Depth on Drainage Area					0.61	1.23	0.75	0.57	0.46	0.37	0.29	0.32
1912												
1	130	122	106	93	208	540	340	122	107	114	100	100
2	130	122	103	93	231	540	321	122	107	114	100	100
3	130	122	103	93	257	540	321	122	107	114	100	100
4	130	122	103	93	287	515	304	114	107	114	100	100
5	130	122	103	93	321	515	287	114	114	114	100	100
6	130	122	103	93	358	515	287	114	114	114	100	100
7	130	122	103	93	398	490	287	114	114	114	100	100
8	130	122	100	97	420	490	272	114	114	114	100	100
9	130	122	100	100	442	490	272	107	114	114	100	100
10	130	122	100	100	490	490	257	107	114	114	100	100
11	130	120	100	100	490	515	244	107	114	114	100	100
12	130	119	100	103	540	515	244	107	114	114	100	100
13	130	119	100	100	540	490	244	107	114	114	100	100
14	130	117	94	107	568	466	257	100	114	114	100	100
15	130	117	92	107	568	466	244	100	114	114	100	100
16	130	116	89	107	568	442	244	100	114	114	100	100
17	130	116	89	110	568	442	244	100	114	114	100	100
18	127	114	89	114	568	442	148	100	114	114	100	100
19	127	114	89	119	595	442	148	100	114	114	100	100
20	127	114	89	122	595	420	130	100	114	107	100	100
21	127	114	89	127	595	420	130	100	114	107	100	100
22	122	114	89	130	595	420	130	100	114	107	100	100
23	122	114	89	130	568	420	130	100	114	107	100	100
24	122	114	89	130	568	398	130	100	114	107	100	100
25	122	114	89	139	568	398	122	100	114	107	100	100
26	122	114	90	148	568	378	122	107	114	107	100	100
27	122	111	92	158	568	378	122	107	114	107	100	100
28	122	108	93	158	540	358	122	107	114	107	100	100
29	122	106	93	167	540	340	122	107	114	107	100	100
30	122	.....	93	177	540	340	122	107	114	107	100	100
31	122	.....	93	.....	540	.....	122	107	.....	107	.....	100
Monthly Mean Discharge, Cu. Ft. per Sec.	127	117	95	117	490	454	209	107	113	111	100	100
Inches Depth on Drainage Area	0.31	0.27	0.23	0.27	1.19	1.07	0.51	0.26	0.27	0.27	0.23	0.24

NOTE.—Daily discharge computed from a rating curve well defined.

* TABLE 81—Continued

DAILY DISCHARGE—VERMILION RIVER—OUTLET LAKE VERMILION, MINN.

RECORDS OF UNITED STATES GEOLOGICAL SURVEY

Cubic Feet Per Second

Day.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1913												
1	98	98	98	101	212	1290	990	466	74	60	95	117
2	98	98	98	101	218	1290	930	515	74	60	95	122
3	98	98	98	101	222	1360	870	466	74	63	95	122
4	98	98	98	101	226	1360	870	490	74	63	98	122
5	98	98	98	101	231	1360	810	442	74	66	101	127
6	98	98	98	101	257	1420	810	378	74	70	101	127
7	98	98	98	101	257	1420	728	244	74	73	98	127
8	98	98	98	101	287	1420	755	231	74	73	98	127
9	98	98	98	101	287	1420	728	208	74	73	98	127
10	98	98	98	101	287	1420	700	158	74	73	98	127
11	98	98	98	101	287	1420	755	122	74	73	98	122
12	98	98	98	101	287	1360	728	114	74	76	98	122
13	98	98	98	106	287	1360	645	106	74	83	98	122
14	98	98	98	106	287	1360	672	103	74	90	98	122
15	98	98	98	106	321	1360	645	98	74	90	98	122
16	98	98	98	112	358	1360	672	98	74	90	106	122
17	98	98	98	119	398	1290	645	98	74	95	106	122
18	98	98	98	125	442	1230	700	98	74	95	106	122
19	98	98	98	132	442	1230	672	98	68	95	106	122
20	98	98	98	138	540	1230	645	90	68	95	106	122
21	98	98	98	145	540	1170	590	90	68	95	106	122
22	98	98	98	152	810	1110	645	83	64	95	106	122
23	98	98	98	158	1110	1110	565	83	62	95	106	122
24	98	98	98	165	1170	1110	645	83	62	95	106	122
25	98	98	98	172	1230	1050	618	76	62	95	106	122
26	98	98	98	179	1230	1050	618	76	62	95	106	122
27	98	98	98	186	1230	990	540	76	62	95	106	122
28	98	98	98	193	1230	990	590	76	62	95	106	122
29	98	.....	98	200	1290	990	515	76	62	95	111	122
30	98	.....	98	205	1290	930	442	76	62	95	114	122
31	98	.....	98	.....	1290	.....	490	76	.....	95	.....	122
Monthly Mean Discharge, Cu. Ft. per Sec.	98	98	98	130	598	1250	685	177	70	84	102	123
Inches Depth on Drainage Area	0.24	0.21	0.24	0.31	1.45	2.94	1.66	0.43	0.16	0.20	0.24	0.30
1914												
1	122	117	130	124	378	810	490	442	231	208	171	117
2	122	117	130	124	442	810	490	442	231	208	171	117
3	122	117	130	124	540	810	490	442	231	208	167	117
4	122	122	130	122	565	810	490	398	231	208	167	117
5	122	122	130	122	590	810	490	398	231	208	167	117
6	122	122	130	122	645	810	490	378	220	208	163	117
7	122	122	130	122	755	810	466	358	208	208	163	117
8	122	122	130	120	755	810	466	340	208	208	163	117
9	122	122	130	120	755	782	490	321	231	208	158	117
10	117	122	130	120	755	782	490	321	231	208	158	117
11	117	127	130	117	1110	755	490	304	220	198	158	117
12	117	127	127	117	1110	755	490	304	231	198	152	114
13	117	127	127	117	1110	755	515	287	231	198	152	114
14	117	127	127	116	1110	755	540	272	231	198	148	114
15	117	127	127	116	1110	755	540	257	231	187	148	114
16	117	127	127	114	1110	728	540	257	231	187	144	114
17	117	127	127	116	1050	700	540	257	231	187	144	114
18	117	127	127	124	1050	672	540	257	231	187	139	114
19	117	127	127	128	1050	540	540	257	231	187	139	114
20	117	127	127	135	1050	540	540	257	231	187	134	114
21	117	127	127	141	1050	540	515	257	231	187	134	114
22	117	130	127	144	990	540	490	257	231	183	130	114
23	117	130	127	144	990	540	490	257	231	183	130	114
24	117	130	127	146	990	540	490	257	231	183	127	114
25	117	130	127	158	990	540	490	257	231	183	127	114
26	117	130	127	169	990	515	490	244	231	177	122	114
27	117	130	127	179	930	515	490	244	220	177	122	114
28	117	130	127	220	870	515	490	231	220	177	117	111
29	117	.....	127	287	870	490	466	231	208	177	117	111
30	117	.....	127	334	870	490	442	231	208	171	117	111
31	117	.....	127	.....	810	.....	442	231	.....	171	.....	111
Monthly Mean Discharge, Cu. Ft. per Sec.	118	125	128	145	884	674	497	298	226	192	145	115
Inches Depth on Drainage Area	0.29	0.27	0.31	0.34	2.15	1.58	1.21	0.72	0.53	0.47	0.34	0.28

* For 1915 records see page 330.

TABLE 82

DAILY DISCHARGE.—KAWISHIWI RIVER—NEAR WINTON, MINN.

RECORDS OF MINNESOTA CANAL AND POWER CO.

Cubic Feet Per Second

Day.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1905												
1							1693	2320	0	3426	1238	1083
2							2650	2342	228	3244	1210	1083
3							2070	1645	910	2899	1210	1109
4							1900	2050	988	1458	1158	1109
5							3192	1613	1180	1898	1134	1134
6							3192	1877	1134	2659	1134	1158
7							3766	3018	1159	2123	1109	1158
8							4131	2901	2286	1350	1083	1158
9							3737	1693	2200	1361	1060	1158
10							3736	2118	1302	1768	1060	1158
11							3459	2550	1400	2339	1039	1158
12							2985	1840	1897	1711	972	1185
13							2818	2315	2534	1341	850	1158
14							2562	846	2650	1083	888	1158
15							3088	203	2294	934	908	1158
16							3370	1172	2008	843	928	1099
17							3097	2605	193	775	928	1070
18							2886	2194	850	734	928	1070
19							422	1887	2435	775	820	1070
20							1800	1606	2387	820	629	1050
21						1340	3243	1406	2353	887	671	1024
22						1912	2608	1288	2332	964	700	1024
23						1960	2422	738	2656	1083	903	1024
24						1994	887	0	3426	1109	1288	998
25						2237	1025	0	3426	1158	1185	975
26						2174	1878	130	3554	1210	1134	951
27						1082	912	622	3719	1265	1109	931
28						2903	2102	622	3790	1288	1083	931
29						2921	2000	492	3719	1265	1060	910
30						2000	1149	0	3581	1265	1060	880
31							2300	0		1238		880
Monthly Mean Discharge, Cu. Ft. per Sec						2052	2470	1422	2086	1493	1016	1065
Inches Depth on Drainage Area							2.40	1.38	1.97	1.45	0.96	1.04
1906												
1	856	506	360	276	1682	2585	2276	455	400	276	400	660
2	837	506	360	289	1840	2920	1152	1150	360	276	400	642
3	837	523	360	289	1836	2444	1095	214	400	276	416	621
4	837	506	360	289	1889	2353	1005	750	400	263	416	600
5	810	506	360	300	1930	2911	1860	524	400	250	400	579
6	783	506	360	300	2105	3146	830	0	380	263	400	579
7	760	491	345	315	2650	3146	880	795	380	276	400	579
8	731	491	345	315	2057	3096	920	0	416	276	416	540
9	731	474	345	330	2172	3074	930	848	435	300	435	523
10	731	474	345	330	2880	3020	950	1275	435	330	435	506
11	713	474	345	345	2706	3094	962	1070	435	330	335	506
12	695	474	330	360	2150	3327	985	830	416	330	491	491
13	695	458	330	416	2370	2764	1050	780	400	330	540	474
14	676	458	330	474	1795	3144	1275	708	400	315	592	474
15	660	435	330	506	1836	2685	985	702	360	300	680	474
16	660	435	330	579	2057	2843	950	525	345	300	783	474
17	660	435	330	660	2913	3070	1546	550	330	289	931	474
18	642	416	320	760	3087	2846	830	600	315	289	975	474
19	642	416	315	856	3212	2940	810	560	300	276	998	435
20	621	400	315	931	3055	2378	830	523	289	289	998	435
21	621	400	315	1024	3008	2830	840	523	289	300	975	458
22	600	400	300	1158	2987	2062	840	523	276	330	931	416
23	600	400	300	1265	3091	1344	830	523	276	330	910	400
24	579	380	300	1491	3113	2259	800	523	263	330	837	400
25	579	380	300	1730	3005	2387	745	523	300	330	783	400
26	579	360	300	2389	2634	2251	740	506	289	330	783	380
27	560	360	300	1654	2605	2623	710	491	300	330	760	360
28	540	360	300	2307	2605	3232	1422	474	289	345	731	360
29	540		289	2600	2565	1870	585	458	276	360	695	360
30	540		289	2580	2446	2050	1181	435	276	380	676	360
31	523		289		2559		455	400		400		360
Monthly Mean Discharge, Cu. Ft. per Sec	672	444	326	904	2446	2690	1012	588	348	310	654	477
Inches Depth on Drainage Area	0.65	0.39	0.32	0.85	2.38	2.53	0.99	0.57	0.33	0.30	0.62	0.46

TABLE 82—Continued

DAILY DISCHARGE—KAWISHIWI RIVER—NEAR WINTON, MINN.

RECORDS OF MINNESOTA CANAL AND POWER CO.

Cubic Feet Per Second

Day.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1907												
1	345	263	200	222	540	5000						
2	345	263	210	235	506	5200						
3	330	263	210	235	491	5250						
4	330	263	210	250	458	5200						
5	330	250	210	263	435	5100						
6	330	250	210	276	416	4900						
7	330	250	210	276	305	4710						
8	330	250	210	276	50	4550						
9	315	250	200	289	59	4350						
10	315	250	200	300	66	4130						
11	315	235	200	315	552	4000						
12	315	235	200	330	836	3375						
13	300	235	200	330	1265	3700						
14	300	235	200	345	1341	3440						
15	300	222	200	345	1366	2947						
16	300	222	200	380	983	2983						
17	300	222	200	380	80	3245						
18	300	222	200	380	81	2900						
19	300	222	190	380	1329	2695						
20	289	210	190	400	2214	1327						
21	289	210	190	400	2270	1604						
22	289	210	190	415	2400	2600						
23	289	210	190	0	1100	3810						
24	289	210	200	0	2390	3700						
25	289	200	200	951	1677	3475						
26	276	200	210	0	3716	3320						
27	276	200	210	880	3810	1669						
28	276	200	222	837	4120	986						
29	276		222	731	4415	970						
30	263		210	621	4710	539						
31	263		222		4760							
Monthly Mean Discharge, Cu. Ft. per Sec.	303	230	204	368	1572	3389						
Inches Depth on Drainage Area	0.29	0.20	0.20	0.35	1.53	3.19						

RECORDS OF INTERNATIONAL JOINT COMMISSION, COÖPERATING WITH UNITED STATES GEOLOGICAL SURVEY

1912												
1												314
2												310
3												302
4												290
5												278
6												270
7												262
8												235
9												235
10											930	235
11												235
12												235
13												235
14										250	747	226
15										346		216
16										559		214
17										608		211
18										478		208
19										460	304	206
20										583	40	203
21										440	98	200
22										276	283	197
23										250	205	196
24										440	302	195
25										358	512	194
26										122	465	193
27										105	414	192
28											382	191
29											352	190
30											327	189
31												188
Monthly Mean Discharge, Cu. Ft. per Sec.												227
Inches Depth on Drainage Area												.22

† TABLE 82—Continued

DAILY DISCHARGE—KAWISHIWI RIVER—NEAR WINTON, MINN.

RECORDS OF INTERNATIONAL JOINT COMMISSION, COÖPERATING WITH UNITED STATES GEOLOGICAL SURVEY

Cubic Feet Per Second

Day.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1913												
1	186	150	133	143	2400	*1950	905	390	304	382	.....	747
2	185	148	133	147	2360	*1710	1030	590	441	387	930	742
3	184	146	133	149	2340	1480	1040	600	794	487	1050	736
4	182	145	132	153	2360	1110	1060	125	227	365	1040	730
5	180	144	131	155	2180	88	1060	127	256	625	908	720
6	177	143	130	157	1630	504	1060	289	445	448	817	714
7	174	142	129	159	1030	2380	1050	347	163	387	817	703
8	172	140	128	161	1210	2840	305	610	272	729	817	698
9	170	139	127	163	920	3380	1340	130	816	262	817	687
10	168	139	127	165	975	3170	736	130	239	436	1363	682
11	165	138	127	167	133	3190	940	494	333	655	1309	676
12	163	137	127	169	133	3040	1040	541	464	648	1270	671
13	163	136	127	170	332	3210	989	530	393	823	1220	661
14	163	135	127	220	854	3220	1380	130	326	638	1190	650
15	163	134	127	306	1600	3190	1050	541	670	938	1140	645
16	163	133	127	339	2230	2460	1300	130	157	1100	1130	640
17	163	133	128	369	2680	2130	1020	133	157	1110	1110	630
18	163	133	129	400	1860	2960	536	555	157	1010	1080	625
19	163	133	130	432	1910	2120	736	381	652	1490	868	620
20	162	133	131	465	2380	1990	738	136	317	1490	575	610
21	162	133	132	546	2930	2960	736	474	154	1470	585	580
22	161	133	133	630	2610	2240	820	571	157	1340	590	561
23	160	133	133	703	2070	1840	906	182	301	1230	590	541
24	159	133	134	854	1920	2630	742	381	807	1260	347	522
25	158	133	134	1050	2580	2000	1110	554	262	1570	145	503
26	157	133	135	1210	2980	2740	1490	353	266	1490	148	484
27	156	133	136	1410	3190	2140	1440	652	322	1680	148	470
28	154	133	137	1580	*2890	2120	1730	120	163	1000	148	455
29	153	.....	138	1750	*2650	2010	1790	364	621	1540	492	446
30	152	.....	139	1270	*2420	1980	1640	378	382	1520	747	437
31	151	.....	141	.....	*2180	.....	1020	133	.....	1500	.....	428
Monthly Mean Discharge, Cu. Ft. per Sec.	165	137	131	520	1930	2290	1060	357	367	968	[1]806	614
Inches Depth on Drainage Area	.16	.12	.13	.49	1.88	2.16	1.03	.35	.35	.94	.73	.60
1914												
1	423	314	235	190	996	2612	1996	1638	667	880	242	197
2	418	311	70	190	1120	2520	1503	1719	924	1480	794	197
3	409	308	15	190	1178	3800	1389	1104	918	1618	615	197
4	400	306	15	190	1131	4475	1996	841	965	495	610	197
5	396	303	15	187	1252	3870	2020	271	931	725	600	197
6	391	300	15	187	1727	3870	2004	502	1015	730	595	197
7	382	297	60	187	2432	3870	1324	868	976	736	590	197
8	374	294	163	187	2831	2914	1355	337	977	736	600	197
9	369	292	60	183	2895	2520	1709	176	792	1488	600	197
10	365	289	15	183	3690	2520	2930	515	981	665	595	235
11	356	286	70	183	3973	2241	2950	696	743	453	585	235
12	356	283	247	180	3684	1146	.....	805	770	792	580	235
13	356	280	243	180	3740	1545	.....	823	776	714	575	235
14	356	277	239	141	3490	*1131	.....	829	898	829	824	235
15	356	274	235	48	3192	1518	.....	836	1032	485	2020	235
16	356	272	231	49	2920	1200	.....	805	1105	1093	1590	235
17	356	269	231	51	2568	2144	.....	784	737	381	1320	235
18	356	266	231	290	2630	*2180	.....	811	964	692	1117	235
19	356	263	227	345	2457	1999	.....	799	782	687	956	235
20	356	260	227	239	2286	1200	1124	272	675	687	817	235
21	356	257	227	247	2643	1131	860	170	805	682	709	235
22	356	254	227	258	2401	.....	810	414	805	676	615	235
23	356	252	227	274	2080	1863	930	330	1113	564	440	235
24	356	250	224	178	2090	.....	342	817	1327	531	274	235
25	356	247	216	73	1464	1131	1493	1052	785	662	235	235
26	350	245	216	71	2120	.....	857	981	1342	635	197	235
27	344	242	212	75	1949	.....	703	866	698	630	163	235
28	338	239	201	623	2018	2520	720	1127	1267	524	163	235
29	332	.....	197	960	2246	.....	759	854	656	142	163	235
30	326	.....	197	879	2695	2020	1322	972	793	406	163	235
31	320	.....	194	.....	2928	.....	1443	1444	.....	906	.....	235
Monthly Mean Discharge, Cu. Ft. per Sec.	364	276	167	241	2414	[2]2318	[3]1415	789	907	733	645	224
Inches Depth on Drainage Area	.35	.24	.16	.23	2.35	1.82	1.02	.77	.85	.71	.61	.22

*Estimated. [1] Mean for 29 days. [2] Mean for 25 days [3] Mean for 23 days.

† For 1915 records see page 330.

TABLE 83

CONVENIENT EQUIVALENTS FOR USE IN HYDRAULIC COMPUTATIONS

1 cubic foot per second equals 7.48 United States gallons per second; equals 646,272 United States gallons per day.

1 cubic foot per second equals 6.23 British imperial gallons per second, equals 538,272 British imperial gallons per day.

1 cubic foot per second for one year covers 1 square mile 1.131 feet or 13.572 inches deep.

1 cubic foot per second for one year equals 31,536,000 cubic feet.

1 cubic foot per second for one 30-day month covers 1 square mile 1.116 inches deep.

1 inch depth on 1 square mile equals 2,323,200 cubic feet; equals 0.0737 cubic foot per second for one year.

1 inch depth on the Upper Rainy Watershed, area 14,500 square miles, equals 33.686 billion cubic feet; equals 1069 cubic feet per second for one year.

1 inch depth on the Lower Rainy Watershed, area 6350 square miles, equals 14.752 billion cubic feet; equals 468 cubic feet per second for one year.

1 inch depth on the Lake of the Woods, Proper, watershed, area 5900 square miles; equals 13.707 billion cubic feet; equals 435 cubic feet per second for one year.

1 inch depth on the Total Lake of the Woods Watershed, area 26,750 square miles, equals 62.146 billion cubic feet; equals 1971 cubic feet per second for one year.

One billion cubic feet equals 386 cubic feet per second for 30 days; equals 31.7 cubic feet per second for one year.

1 foot depth on the Lake of the Woods, area 1485 square miles, equals 41.4 billion cubic feet.

1 foot depth on Rainy Lake, area 345 square miles, equals 9.6 billion cubic feet

1 foot depth on 100 square miles equals 2.79 billion cubic feet.

1 foot depth on the Lake of the Woods, area 1485 square miles, equals 47,916 cubic feet per second for ten days, 15,972 cubic feet per second for 30 days and 1313 cubic feet per second for one year.

1 foot depth on Rainy Lake, area 345 square miles, equals 11,132 cubic feet per second for 10 days, 3711 cubic feet per second for 30 days and 305 cubic feet per second for one year.

1 foot depth on 100 square miles equals 3227 cubic feet per second for 10 days, 1076 cubic feet per second for 30 days and 88 cubic feet per second for one year.

100 cubic feet per second for 30 days covers the Vermilion Lake Watershed, area 475 square miles, above outlet of Lake, to a depth of 0.235 inch.

1000 cubic feet per second for 30 days covers the Kawishiwi River Watershed, area 1185 square miles above entrance to Fall Lake, to a depth of 0.942 inch.

1000 cubic feet per second for 30 days covers the Little Fork River Watershed, area 1655 square miles above Little Fork, to a depth of 0.674 inch.

1000 cubic feet per second for 30 days, covers the Big Fork River Watershed, area 1490 square miles above Big Falls, to a depth of 0.749 inch.

10,000 cubic feet per second for 30 days covers the Upper Rainy Watershed, area 14,500 square miles, to a depth of 0.770 inch.

10,000 cubic feet per second for 30 days covers the Lower Rainy and Lake of the Woods, Proper, Watersheds, area 12,250 square miles, to a depth of 0.910 inch.

10,000 cubic feet per second for 30 days covers the total Lake of the Woods Watershed, area 26,750 square miles, to a depth of 0.417 inch.

1 horsepower equals 550 foot-pounds per second or 33,000 foot-pounds per minute.

1 horsepower equals 0.746 kilowatt.

1 horsepower equals 1 cubic foot per second falling 8.80 feet.

Horsepower of water wheel equals $\frac{\text{cubic feet per second} \times \text{head} \times \text{efficiency}}{8.80}$.

1000 cubic feet per second at 75 per cent efficiency equals 85.227 horsepower per foot head.

1000 cubic feet per second at 80 per cent efficiency equals 90.909 horsepower per foot head.

TABLE 84

AREA OF DRAINAGE BASINS—LAKE OF THE WOODS WATERSHED

Drainage Basin	AREA				
	Total Sq. Mi.	Canada		United States	
		Sq. Mi.	Per Cent	Sq. Mi.	Per Cent.
Above Kenora	26,750	15,565	58.2	11,185	41.8
Water Surface	3,960	2,795	70.6	1,165	29.4
Land Surface	22,790	12,770	56.0	10,020	44.0
Above Mouth of Rainy River	20,850	10,850	52.0	10,000	48.0
Water Surface	2,160	1,460	67.6	700	32.4
Land Surface	18,690	9,390	50.2	9,300	49.8
Above Fort Frances and International Falls	14,500	10,135	69.9	4,365	30.1
Water Surface	2,025	1,445	71.4	580	28.6
Land Surface	12,475	8,690	69.7	3,785	30.3
Above Kettle Falls	7,200	3,290	45.7	3,910	54.3
Water Surface	1,000	490	49.0	510	51.0
Land Surface	6,200	2,800	45.2	3,400	54.8

SECONDARY DRAINAGE BASINS

Drainage Basin	AREAS IN SQUARE MILES		
	Water Surface	Land Surface	Total
Tributary to Rainy Lake			
From above Kettle Falls	1,000	6,200	7,200
Kawishiwi River above outlet of Garden Lake	76	1,109	1,185
Vermilion River above Crane Lake	115	790	905
Vermilion River above outlet of Vermilion Lake	85	390	475
Seine River above Wild Potato Lake	223	2,027	2,250
Above outlet of Lac de Mille Lacs	106	554	660
Turtle River above Redgut Bay	185	1,705	1,890
Little Turtle River above outlet of Turtle Lake	27	225	252
Turtle River above Little Turtle Lake	137	1,223	1,360
Turtle River above outlet of Turtle Lake	120	1,000	1,120
Turtle River above outlet of White Otter Lake	70	300	370
Otukamamoan Lake above outlet of Lake	50	375	425
Manitou Lake above Government Dam	70	275	345
Tributary to Rainy River			
Little Fork River above mouth	29	1,786	1,815
Big Fork River above mouth	77	1,938	2,015
Tributary to Lake of the Woods			
Above outlet of Whitefish Lake	180	655	835
Above outlet of Denmark Lake	62	290	352
Above outlet of Kakagi (Crow) Lake	47	81	128
Above outlet of Atikwa Lake	31	180	211
Above outlet of Berry Lake	68	234	302
Above outlet of Dryberry Lake	60	202	262
Above outlet of Dogtooth Lake	30	138	168

TABLE 85

AREAS OF LAKES—LAKE OF THE WOODS WATERSHED

[Includes Lakes above 10 sq. mi. in area]

Name of Lake	Area of Water Surface in Square Miles	Name of Lake	Area of Water Surface in Square Miles	Name of Lake	Area of Water Surface in Square Miles
Lake of the Woods	1485.*	Kabetogama	36.5	Pickerel	20.8
Shoal Lake (Lac Plat)	107.	Kakagi (Crow)	46.0	Pipestone	14.9
Rainy Lake	345.	Kawnipi	20.2	Quetico	17.8
Agnes	14.0	Kekwakwan (Lac La Croix)	46.8	Rowan	20.8
Anzhekumming	20.0	Lac des Mille Lacs	93.6	Saganaga	31.0
Atikwa	21.7	Lawrence	14.0	Saganagon	10.3
Basswood	41.0	Little Turtle	10.1	Sandpoint	13.9
Bowstring	14.2	Manitou	34.1	Sturgeon (Maligne Watershed)	16.9
Burntside	13.8	Namakan	38.0	Sturgeon (To Flint Lake)	13.0
Clearwater	12.0	Net	11.6	Trout	13.2
Clearwater West	12.8	Northern Light	26.4	Vermilion	59.7
Crooked	17.3	Otukamamoan	20.9	White Otter	33.6
Dogtooth	11.8	Pelican	19.0		
Dryberry	42.5				

* This area comprises, besides Shoal Lake, what is now commonly known as Lake of the Woods, including Whitefish Bay and Clearwater Bay, formerly known as Whitefish Lake and Clearwater Lake.

TABLE 86

AREAS IN PERCENTAGES—LAKE OF THE WOODS WATERSHED

Watershed Area	Per Cent of Total Watershed Area	Water Surface	Per Cent of Total Water Surface
Above Kenora	100.0	Above Kenora	100.0
Above Mouth of Rainy River	78.0	Above Mouth of Rainy River	54.5
Above Fort Frances and International Falls	54.2	Above Fort Frances and International Falls	51.1
Above Kettle Falls	26.9	Above Kettle Falls	25.3

Watershed	WATER SURFACE AREA IN CANADA EXPRESSED AS PERCENTAGE OF:–		WATER SURFACE AREA IN UNITED STATES EXPRESSED AS PERCENTAGE OF:–		Total Water Surface Area in United States and Canada expressed as percentage of Total Watershed Area
	Watershed Area in Canada	Total Watershed Area	Watershed Area in U. S.	Total Watershed Area	
Above Kenora	18.0	10.4	10.4	4.4	14.8
Above Mouth of Rainy River	13.5	7.0	7.0	3.4	10.4
Above Fort Frances and International Falls	14.3	10.0	13.3	4.0	14.0
Above Kettle Falls	14.9	6.8	13.0	7.1	13.9

TABLE 87

DATA RELATING TO LOGGING DAMS—LAKE OF THE WOODS WATERSHED

For Location of Dams see Map, Plate 126.

No.	Location	Approximate Present Storage			Tributary Drainage Area, Sq. Miles	Annual Runoff 8″ on Drainage Area In Billion Cubic Feet	Description and Remarks
		Lake Area Square Miles	Volume Billion Cu. Ft.				
			Per Foot Depth on Lake	Total (where reported)			
1	Dogtooth Lake	11.8	0.33	.....	168	3.12	Dam recently repaired and used in 1913.
2	Berry Lake	5.0	0.14	.....	302	5.61	Sand foundations. Often washed out. Used 1910 and 1911.
3	Dryberry Lake	42.5	1.18	.....	262	4.87	Built about 1895. Repaired in last few years by Keewatin Lumber Co. Used 1910 and 1911.
4	Whitefish Lake and Sturgeon Lake, into Lake of The Woods.	20.4	0.57	.....	835	15.50	Open log crib with rock and clay fill on upstream side. A water level 4 ft. to 5 ft. above dam will raise normal level of Sturgeon Lake 1½ to 2 ft. Built by Keewatin Lumber Company in 1912.
5	Atikwa or Spider Lake.	21.7	0.60	.....	211	3.92	Old dam—Not of much service now.
6	Denmark Lake and Rowan Lake.	22.8	0.64	.....	352	6.54	Built about 1895. Used 1910 and 1911. New dam built in 1911 and 1912.
7	Cameron Lake	5.4	0.15	.....	23	0.43	Has not been used for some years. Dam needs repair, but about 4 ft. could be held.
8	Otter Lake	2.2	0.06	.....	8	0.15	Not used for some years.
9	Kakagi or Crow Lake.	46.0	1.28	.....	128	2.38	Built about 1893, kept up since and used in 1910 and 1911. Repaired in last few years.
10	Nestors Falls Dam at Crooked Pine Lake.	.7	0.02	.....	145	2.69	Rock filled crib dam on rock foundation. Used in 1910 and 1911.
11	Clearwater Lake	5.6	0.16	.....	167	3.10	Logging route via Pipestone and Clearwater Lakes alternative to route via Loon, Jackfish and Footprint Lakes.
12	Pipestone Lake	14.9	0.42	.....	115	2.14	Built about 1900. Good dam site. Lake might be raised 3 ft. or more without flooding.
13	Footprint Lake	2.6	0.07	.....	385	7.16	Built about 1899.
14	Jackfish Lake	7.6	0.21	1.1	120	2.23	Built about 1900. 3 ft. fall to Footprint Lake.
15	Loon Lake	9.0	0.25	1.2	78	1.45	Built about 1902—washed out, rebuilt 1906.
16	Kaiarskons Lake	9.0	0.25	.....	35	0.65	One 10′ gate. Originally three dams. 4 ft. drop from lake to dam, 80 rods from lake. Built about 1908. Head of system.
17	Sphene or Six Mile Lake.	.....	.....	.....	482	8.96	Formerly two dams at outlet, crude, and probably washed out.
18	Manitou Lake and Anzhekumming Lake.	54.1	1.51	.....	345	6.41	Built about 1900, primarily to improve navigation. Repaired about 1910.
19	Otukamamoan Lake.	20.9	0.58	.....	425	7.90	Dam washed out.
20	Little Turtle Lake.	.....	.....	.....	.....	.....	No dam—leading cribs only at Otter Falls below the Lake.
21	Big Turtle Lake	4.0	0.11	1.1	1090	20.26	Dam built about 1910. 3 gates, one 16 ft. and two 12 ft.
22	Bending Lake	4.6	0.13	1.0	640	11.89	Dam built about 1910.
23	Richard or Paddon Lake.	5.0	0.14	.....	502	9.33	Dam built about 1910. Rapids below dam—2 ft. drop to dam.
24	White Otter Lake.	33.6	0.94	.....	370	6.88	Two gates, one 12 ft. and one 10 ft. Erected 1912.
25	West Clearwater Lake.	12.8	0.36	.....	85	1.58	Built to facilitate logging operations by forming new route, hoisting from White Otter to West Clearwater, and across to Turtle Lake on Little Turtle River.

These data were secured, mainly, through coöperation with the State Forester of Minnesota, the Department of Lands, Forests, and Mines, Ontario, the Supervisor of the Superior National Forest, the Ontario Hydro-Electric Power Commission and various Lumbering Interests.

TABLE 87—Continued

DATA RELATING TO LOGGING DAMS—LAKE OF THE WOODS WATERSHED

No.	Location	Approximate Present Storage			Tributary Drainage Area. Sq. Miles	Annual Runoff 8" on Drainage Area In Billion Cubic Feet	Description and Remarks
		Lake Area Square Miles	Volume Billion Cu. Ft. Per Foot Depth on Lake	Volume Billion Cu. Ft. Total (where reported)			
26	Elsie Lake	3.1	0.09	0.5	111	2.06	Part of White Otter Lake System. One 10 ft. gate.
27	Mable Lake	1.7	0.05	0.3	91	1.69	Part of White Otter Lake System.
28	Martin Lake	4.8	0.13		140	2.60	One 12 ft. gate. Used 1910 and 1911. No more logging of importance. Last drive 1914.
29	Whitefish Lake, Turtle River Watershed.	4.6	0.13	0.8	107	1.99	One 12 ft. gate. Martin River. No more logging of importance. Last drive 1914.
30	Turtle Lake (Little Turtle River Watershed).	8.8	0.25		252	4.68	Two gates—one 10 ft. and one 9 ft.
31	Eye Lake	4.6	0.13	0.5	31	0.58	Three small dams, no reservoir. Built about 1910.
32	East Clearwater Lake.	12.0	0.33		106	1.97	Stone filled cribs backed with dry masonry. Gate single steel plate braced with angle irons. Dam also used for power purposes.
33	Lac Des Mille Lacs.	93.6	2.61		660	12.27	Old dam is washed out.
34	Beaverhouse Lake.	7.5	0.21	1.3	248	4.61	One 12 ft. gate. Built about 1910. Nothing done in 1914.
35	Quetico Lake	17.8	0.50	4.0	198	3.68	One 12 ft. gate. Built about 1910.
36	Long Lake	8.5	0.24	3.0	52	0.97	One 10 ft. gate. Built about 1910. Long Lake was as far as logging had gone in 1914.
37	Kasakokwog or Ann Lake.	3.1	0.09	0.5	32	0.59	One 10 ft. gate. Three feet drop between dam and lake.
38	Knife Lake	9.5	0.26	1.1	167	3.10	Timber crib piers, two sluices with stop logs.
39	Canada Carp Lake.	2.0	0.06	0.2	8	0.15	Timber crib piers, sluices with stop logs.
40	Carp or Birch Lake	1.5	0.04		277	5.15	Timber crib piers, sluices with stop logs.
41	Stony River						Earth embankment and timber crib piers, sluices with Tainter gates.
42	Stony River						Earth embankment and timber crib piers, sluices with Tainter gates.
43	Stony River						Earth embankment and timber crib piers, sluices with Tainter gates.
44	Stony River	*4.5	0.13	0.6	160	2.97	Earth embankment and timber crib piers, sluices with Tainter gates.
45	Stony River						Earth embankment and timber crib piers, sluices with Tainter gates.
46	Little Stony River						Earth embankment and timber crib piers, sluices with Tainter gates.
47	Stony River						Earth embankment and timber crib piers, sluices with Tainter gates.
48	Birch Lake	9.5	0.26	1.8	*790	14.68	Earth embankment and timber crib piers, sluices with Tainter gates.
49	Garden Lake	11.6	0.32	1.3	1185	22.02	Timber crib piers, six sluices with Tainter gates.
50	Burntside Lake	13.8	0.38	1.3	66	1.23	Timber crib piers, sluices with stop logs.
51	Vermilion Lake	59.7	1.66		475	8.82	Timber and rock fill overfall dam.
52	Deer Creek	4.0	0.11	0.9	42	0.78	Timber crib and sliding gates.
53	Rice River	4.3	0.12	1.0	55	1.02	Timber crib piers, 3 sluices with sliding gates.
54	Bowstring River	27.0	0.75	3.2	255	4.74	Timber crib piers, sluices with stop logs.
55	Popple River	15.0	0.42	2.3	135	2.51	Timber crib piers, sluices with stop logs.
56	Bear River						Timber crib piers and sluices.
57	Black River						Timber and earth dam with sluice.
58	Rapid River						Masonry and timber dam with sluices.

* Indefinite.

TABLE 88

DATA SHOWING RELATION BETWEEN LOAD AND EFFICIENCY—KENORA MUNICIPAL POWER PLANT

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

Date	Water Level in Fore Bay	Total Discharge c. f. s.	Waste over Weir c. f. s.	Discharge through Plant c. f. s.	Load on Plant K. W.	Effective Head Feet	Over-all Efficiency Per cent
Feb. 24, 1913	1060.31	1047.8	19.8	1028.0	1059	22.89	53.2
Do	1060.29	1329.7	19.1	1310.6	1323	22.74	52.6
Feb. 25, 1913	1060.29	1312.0	19.1	1292.9	1389	22.58	56.2
Do	1060.29	1242.1	19.1	1223.0	1359	22.58	58.4
Do	1060.29	1282.0	19.1	1262.9	1340	22.58	55.5
Do	1060.29	1309.0	19.5	1289.5	1359	22.65	55.0
Feb. 26, 1913	1060.30	1394.5	19.5	1375.0	1444	22.50	55.3
Mar. 2, 1913	1060.31	711.3	19.5	691.8	810	23.35	59.4
Do	1060.28	776.7	18.8	757.9	836	23.29	55.9
Mar. 3, 1913	1060.32	1393.3	20.2	1373.1	1454	22.59	55.4
Do	1060.32	1463.9	20.2	1443.7	1610	22.47	58.6
Do	1060.32	1506.4	20.2	1486.2	1668	22.43	59.1
Mar. 7, 1913	1060.32	1259.4	19.1	1240.3	1372	22.60	57.8
Do	1060.32	1312.3	19.1	1293.2	1357	22.60	54.8
Do	1060.31	1236.4	18.7	1217.7	1316	22.59	56.5
Do	1060.36	1253.7	20.6	1233.1	1282	22.74	54.0
Do	1060.35	1242.2	20.2	1222.0	1267	22.68	54.0
Do	1060.35	1200.4	20.2	1180.2	1265	22.68	55.8
Do	1060.36	1255.6	20.5	1235.1	1284	22.70	54.0
Mar. 8, 1913	1060.38	1249.8	21.3	1228.5	1253	22.78	53.0
Do	1060.37	1204.9	20.9	1184.0	1263	22.77	55.3
Do	1060.35	1239.3	20.2	1219.1	1236	22.73	52.8
Do	1060.36	1223.7	20.6	1203.1	1250	22.74	54.0
Do	1060.34	1249.3	19.8	1229.5	1266	22.76	53.5
Do	1060.33	1266.4	19.5	1246.9	1307	22.69	54.5
Do	1060.33	1262.6	19.5	1243.1	1275	22.64	53.5
Mar. 9, 1913	1060.42	815.6	22.8	792.8	717	23.29	45.8
Do	1060.42	771.5	22.8	748.7	767	23.29	51.9
Do	1060.43	776.6	23.2	753.4	727	23.31	48.9
Do	1060.44	765.4	23.6	741.8	710	23.42	48.2
Do	1060.45	719.0	24.0	695.0	702	23.52	50.8
Do	1060.44	748.8	23.6	725.2	696	23.49	48.2
Do	1060.43	613.0	23.2	589.8	672	23.46	57.2
Mar. 10, 1913	1060.37	1454.4	20.9	1433.5	1567	22.59	57.2
Do	1060.38	1538.0	21.3	1516.7	1607	22.52	55.5
Do	1060.37	1468.8	20.9	1447.9	1622	22.48	58.8
Mar. 15, 1913	1060.37	1441.7	20.9	1420.8	1613	22.69	59.2
Do	1060.37	1541.2	20.9	1520.3	1639	22.62	56.2
Do	1060.36	1439.2	20.5	1418.7	1607	22.54	59.4
Mar. 19, 1913	1060.35	1303.8	20.2	1283.6	1351	22.68	54.7
Do	1060.35	1270.2	20.2	1250.0	1354	22.68	56.3
Do	1060.35	1279.7	20.2	1259.5	1354	22.68	56.1
Do	1060.36	1202.9	20.6	1182.3	1337	22.71	58.8
Mar. 20, 1913	1060.41	1265.6	22.4	1243.2	1321	22.76	55.1
Do	1060.41	1318.2	22.4	1295.8	1340	22.76	53.6
Do	1060.41	1317.7	22.4	1295.3	1343	22.76	53.8
Do	1060.41	1269.6	22.4	1247.2	1338	22.76	55.6
Apr. 4, 1913	1060.47	693.5	24.7	668.8	520	23.54	39.0
Do	1060.48	729.3	25.1	704.2	536	23.54	38.4
Do	1060.49	754.6	25.5	729.1	549	23.54	37.9
Do	1060.49	712.8	25.5	687.3	519	23.59	37.8
Do	1060.49	643.7	25.5	618.2	428	23.63	34.7
Do	1060.47	687.4	24.7	662.7	496	23.55	37.5
Do	1060.48	702.9	25.1	677.8	501	23.57	37.0
Apr. 5, 1913	1060.47	657.2	24.7	632.5	547	23.55	43.3
Do	1060.49	671.7	25.5	646.2	519	23.61	40.1
Do	1060.49	666.5	25.5	641.0	552	23.57	43.1
Do	1060.49	710.6	25.5	685.1	529	23.56	38.7
Do	1060.49	691.4	25.5	665.9	527	23.56	39.7
Do	1060.50	618.5	25.9	592.6	394	23.62	33.3
Do	1060.50	668.1	25.9	642.2	505	23.60	39.4
Do	1060.50	562.6	25.9	536.7	527	23.58	49.1
Do	1060.50	719.8	25.5	694.3	525	23.59	37.8
Do	1060.50	620.4	25.9	594.5	527	23.54	44.6
Do	1060.48	709.0	25.1	683.9	506	23.57	37.1
Apr. 24, 1913	1060.93	1376.6	44.7	1331.9	1176	23.10	45.1
Do	1060.93	1259.0	44.7	1214.3	1204	23.05	50.8

TABLE 89

MONTHLY MEAN HEAD, LOAD, AND DISCHARGE—KENORA MUNICIPAL POWER PLANT

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

Date	1907			1908			1909			1910		
	Head Feet	Load K. W.	Discharge c. f. s.	Head Feet	Load K. W.	Discharge c. f. s.	Head Feet	Load K. W.	Discharge c. f. s.	Head Feet	Load K. W.	Discharge c. f. s.
Jan.				21.52	272	617	23.05	675	735	23.13	1097	1066
Feb.				21.53	552	747	23.05	802	834	23.36	1079	1046
Mar.				21.22	197	577	22.80	742	816	23.23	867	893
Apr.				20.67	175	586	21.44	941	1043	19.66	956	1151
May				20.19	160	598	21.65	750	896	18.70	873	1137
June				18.92	162	641	22.20	535	712	19.55	694	928
July				18.81	173	645	22.63	472	671	21.15	624	820
Aug.				18.77	207	655	22.91	344	607	22.60	602	760
Sept.	21.82	143	554	20.17	219	619	22.74	521	715	22.27	669	826
Oct.	21.16	178	569	21.07	259	621	22.51	906	968	21.75	976	1060
Nov.	21.20	217	588	22.18	301	625	22.65	1040	1056	20.65	1047	1168
Dec.	21.66	300	633	23.05	479	668	22.87	1139	1117	20.36	1136	1257

Date	1911			1912			1913			1914		
Jan.	20.29	1118	1234	20.36	1203	1303	22.75	1474	1359	22.70	1123	1085
Feb.	19.99	1090	1236	19.79	1250	1386	22.80	1356	1273	22.87	1031	1005
Mar.	19.92	894	1084	19.93	1237	1362	22.90	1250	1185	22.35	995	1016
Apr.	19.50	933	1139	20.25	1228	1338	23.29	904	926	22.78	684	767
May	19.68	862	1071	21.18	1155	1219	21.13	956	1066	22.74	693	797
June	19.98	802	1014	21.77	997	1073	20.18	920	1091	20.81	719	868
July	20.24	535	820	23.22	986	1000	21.65	840	959	20.36	484	764
Aug.	19.96	485	801	22.22	1051	1083	21.82	483	711	20.28	650	890
Sept.	19.17	802	1044	23.08	554	732	21.85	734	877	21.80	802	905
Oct.	19.37	999	1202	23.47	1006	1012	22.51	1289	1234	22.65	950	987
Nov.	19.11	1116	1308	23.30	1176	1121	22.63	1288	1224	23.24	923	917
Dec.	20.80	1153	1240	23.06	1222	1166	22.56	1278	1220	23.20	1069	1030

Date	1915		
Jan.	23.22	1071	1031
Feb.	23.17	1038	1010
Mar.	23.51	799	835
Apr.	22.23	855	932
May	21.04	719	873
June	20.57	593	806
July	19.67	567	831
Aug.	20.18	407	739
Sept.	22.38	735	856
Oct.	22.55	1316	1250
Nov.	22.39	1452	1358
Dec.	22.43	1414	1327

TABLE 90

MONTHLY MEAN HEAD, POWER AND DISCHARGE

RAINY RIVER AT INTERNATIONAL FALLS AND FORT FRANCES

Records of Minnesota & Ontario Power Company

Date	Average Head Water	Average Tail Water	Average Head Feet	Average H. P. Developed			Average Discharge C. F. S.			Average Discharge* adopted by Engrs. Int. Joint Comm.
				U. S. Side	Canadian Side	Total	Through Plant	Waste	Total	
1910										
Sept.	491.87	462.45	29.42	8259	3309	11568	4325	.....	4325	5043
Oct.	490.71	462.73	27.98	8712	3768	12480	4910	.....	4910	5473
Nov.	489.21	463.48	25.73	7886	3957	11843	5082	.....	5082	5739
Dec.	488.48	463.24	24.24	5019	3524	8543	3738	.....	3738	4100
1911										
Jan.	488.32	462.37	25.95	2457	3458	5915	2519	.....	2519	2800
Feb.	488.28	462.21	26.07	1659	3330	4989	2104	.....	2104	2505
Mar.	487.89	462.33	25.56	2344	2974	5318	2273	.....	2273	2594
Apr.	488.30	461.63	26.67	1949	3260	5209	2170	.....	2170	2600
May	489.29	462.27	27.02	6341	3354	9695	3950	.....	3950	4810
June	490.93	463.42	27.51	8121	3488	11609	4647	35	4682	6016
July	492.62	461.77	30.85	6675	3039	9714	3474	366	3840	4211
Aug.	493.10	463.45	29.65	11425	3655	15080	5611	200	5811	6189
Sept.	492.88	463.09	29.79	10897	3533	14430	5343	21	5374	5725
Oct.	492.70	462.56	30.14	10338	3457	13795	5052	.....	5052	4969
Nov.	492.31	463.25	29.06	9267	3404	12671	4809	.....	4809	4977
Dec.	491.82	463.63	28.19	9679	3282	12961	5072	.....	5072	5180
1912										
Jan.	491.10	464.40	26.70	8527	3530	12057	5008	.....	5008	5334
Feb.	490.35	463.96	26.39	7084	3487	10571	4420	.....	4420	4828
Mar.	489.41	463.55	25.86	6879	3466	10345	4413	.....	4413	4738
Apr.	488.73	462.79	25.94	7193	3440	10633	4521	.....	4521	4851
May	490.63	464.17	26.46	10076	3502	13578	5662	.....	5662	6088
June	493.76	463.17	30.59	13566	3414	16980	6124	.....	6124	6016
July	495.52	464.04	31.48	14238	3569	17807	6247	1600	7847	7700
Aug.	495.78	464.36	31.42	14229	3911	18140	6370	1846	8216	8120
Sept.	495.82	464.08	31.74	13983	3785	17768	6269	1020	7289	7368
Oct.	495.82	463.79	32.03	14534	4019	18553	6400	50	6450	6881
Nov.	495.38	463.72	31.66	13945	4021	17966	6260	.....	6260	6727
Dec.	494.67	464.81	29.86	11855	3815	15670	5789	.....	5789	6280
1913										
Jan.	493.90	465.09	28.81	11937	4016	15953	6111	.....	6111	6620
Feb.	492.85	465.42	27.43	11254	3904	15158	6096	.....	6096	6561
Mar.	491.68	465.18	26.50	10645	3702	14347	5973	.....	5973	6417
Apr.	490.94	464.73	26.22	10482	3736	14218	5982	.....	5982	6372
May	492.27	465.08	27.19	11364	3759	15123	6135	11	6146	6620
June	495.60	465.26	30.34	13387	3707	17094	6215	2157	8372	7277
July	496.68	467.73	28.95	11822	3478	15300	5829	8692	14521	12599
Aug.	496.80	465.19	31.62	13668	3598	17266	6025	4586	10611	8535
Sept.	496.70	463.77	32.93	14837	3723	18560	6217	32	6249	6770
Oct.	496.49	464.18	32.31	14408	3867	18275	6238	36	6274	6350
Nov.	496.22	463.70	32.52	12970	3813	16783	5692	1	5693	6096
Dec.	495.86	464.79	31.08	12814	3796	16610	5896	.....	5896	6303
1914										
Jan.	495.18	465.08	30.10	12940	3969	16909	6197	.....	6197	6719
Feb.	494.34	465.67	28.67	12187	4104	16291	6268	.....	6268	6859
Mar.	493.33	464.56	28.77	12359	3963	16322	6258	.....	6258	6706
Apr.	492.36	464.41	27.95	11317	3909	15226	6209	.....	6209	6693
May	493.09	466.17	26.92	11260	4294	15554	6373	.....	6373	6868
June	495.12	465.53	29.58	12907	7882	20789	7752	46	7798	8463
July	496.87	466.34	30.53	12712	11111	23823	8606	1249	9855	10464
Aug.	496.64	465.55	31.09	13966	13476	27442	9734	101	9835	10044
Sept.	496.19	465.67	30.52	13157	13574	26731	9661	35	9696	9749
Oct.	496.20	465.75	30.45	12989	13476	26465	9586	42	9628	9787
Nov.	495.60	465.79	29.81	12591	12571	25162	9311	45	9356	9926
Dec.	494.70	465.72	28.98	10298	11263	21561	8206	.....	8206	8994

* These values are derived from the daily discharge as estimated by the Engineers of the International Joint Commission, from October 25th, 1905, to August 13th, 1911, Table 75, and from the daily discharge as estimated by the Department of Public Works, Canada, from August 14th, 1911, to date, Table 75.

TABLE 90—Continued

MONTHLY MEAN HEAD, POWER, AND DISCHARGE

RAINY RIVER AT INTERNATIONAL FALLS AND FORT FRANCES

Records of Minnesota & Ontario Power Company

Date.	Average Head Water	Average Tail Water	Average Head Feet	Average H. P. Developed			Average Discharge c. f. s.			Average Discharge* adopted by Engrs. Int. Joint Comm.
				U. S. Side	Canadian Side	Total	Through Plant	Waste	Total	
					1915					
Jan.	493.50	466.20	27.30	9413	10700	20113	8126	.....	8126	9241
Feb.	492.30	465.06	27.24	6647	10291	16938	6859	.....	6859	7836
Mar.	490.76	464.14	26.62	7974	7930	15904	6590	.....	6590	7356
Apr.	489.48	464.36	25.12	7338	7818	15156	6655	.....	6655	7502
May	490.23	465.05	25.18	7067	8215	15282	6694	5	6699	7805
June	492.09	466.21	25.88	6154	9033	15187	6473	.....	6473	7336
July	494.71	465.77	28.94	9617	10397	20014	7629	14	7643	8327
Aug.	495.49	464.97	30.52	11596	11267	22863	8263	3	8266	8747
Sept.	495.63	464.38	31.25	9706	10445	20151	7112	7	7119	7509
Oct.	495.72	764.30	31.42	8958	9697	18655	6549	.....	6549	6983
Nov.	496.34	464.43	31.91	9484	9503	18987	6562	.....	6562	6915
Dec.	496.78	466.04	30.74	10464	12324	22788	8176	.....	8176	8786

* These values are derived from the daily discharge as estimated by the Engineers of the International Joint Commission, from October 25th, 1905, to August 13th, 1911, Table 75, and from the daily discharge estimated by the Department of Public Works, Canada, from August 14th, 1911, to date, Table 75.

TABLE 91

RATES OF DISCHARGE FOR 10 AND 11 DAY PERIODS EQUIVALENT TO VOLUME REPRESENTED BY GIVEN DEPTH ON LAKE OF THE WOODS

AREA 1485 SQUARE MILES

Feet Depth on Lake	Rate of Discharge in Cu. Ft. per Sec.		Feet Depth on Lake	Rate of Discharge in Cu. Ft. per Sec.		Feet Depth on Lake	Rate of Discharge in Cu. Ft. per Sec.		Feet Depth on Lake	Rate of Discharge in Cu. Ft. per Sec.	
	For 10 days	For 11 days		For 10 days	For 11 days		For 10 days	For 11 days		For 10 days	For 11 days
0.01	479	436	0.31	14854	13504	0.61	29229	26572	0.91	43603	39640
0.02	958	871	0.32	15333	13939	0.62	29708	27007	0.92	44082	40075
0.03	1437	1307	0.33	15812	14375	0.63	30187	27443	0.93	44562	40511
0.04	1917	1742	0.34	16292	14810	0.64	30666	27878	0.94	45041	40946
0.05	2396	2178	0.35	16771	15246	0.65	31145	28314	0.95	45520	41382
0.06	2875	2613	0.36	17250	15681	0.66	31624	28749	0.96	45999	41817
0.07	3354	3049	0.37	17729	16117	0.67	32104	29185	0.97	46478	42253
0.08	3833	3485	0.38	18208	16553	0.68	32583	29621	0.98	46957	42689
0.09	4312	3921	0.39	18687	16989	0.69	33062	30057	0.99	47436	43125
0.10	4792	4356	0.40	19166	17424	0.70	33541	30492	1.00	47916	43560
0.11	5271	4791	0.41	19646	17860	0.71	34020	30928	1.01	48395	43996
0.12	5750	5227	0.42	20125	18295	0.72	34499	31363	1.02	48874	44431
0.13	6229	5662	0.43	20604	18731	0.73	34978	31799	1.03	49353	44867
0.14	6708	6098	0.44	21083	19166	0.74	35458	32234	1.04	49832	45302
0.15	7187	6533	0.45	21562	19602	0.75	35937	32670	1.05	50311	45738
0.16	7667	6969	0.46	22041	20037	0.76	36416	33105	1.06	50790	46173
0.17	8146	7404	0.47	22521	20473	0.77	36895	33541	1.07	51270	46609
0.18	8625	7840	0.48	23000	20909	0.78	37374	33977	1.08	51749	47045
0.19	9104	8276	0.49	23479	21345	0.79	37853	34413	1.09	52228	47481
0.20	9583	8712	0.50	23958	21780	0.80	38333	34848	1.10	52707	47916
0.21	10062	9148	0.51	24437	22216	0.81	38812	35284	1.11	53186	48352
0.22	10542	9583	0.52	24916	22651	0.82	39291	35719	1.12	53666	48787
0.23	11021	10019	0.53	25396	23087	0.83	39770	36155	1.13	54145	49223
0.24	11500	10454	0.54	25875	23522	0.84	40249	36590	1.14	54624	49658
0.25	11979	10890	0.55	26354	23958	0.85	40728	37026	1.15	55103	50094
0.26	12458	11325	0.56	26833	24393	0.86	41207	37461	1.16	55582	50529
0.27	12937	11761	0.57	27312	24829	0.87	41687	37897	1.17	56061	50965
0.28	13417	12197	0.58	27791	25265	0.88	42166	38333	1.18	56541	51401
0.29	13896	12633	0.59	28270	25701	0.89	42645	38769	1.19	57020	51837
0.30	14375	13068	0.60	28750	26136	0.90	43124	39204	1.20	57499	52272

TABLE 92

RELATION BETWEEN RATE OF DISCHARGE THROUGH ALL OUTLETS OF LAKE OF THE WOODS AND TAIL WATER LEVELS AT KEEWATIN

Tail Water Level	Discharge c.f.s.	Difference c.f.s.	Tail Water Level	Discharge c.f.s.	Difference c.f.s.	Tail Water Level	Discharge c.f.s.	Difference c.f.s.	Tail Water Level	Discharge c.f.s.	Difference c.f.s.
1033.55	4820	60	1037.05	10005	85	1040.55	17705	140	1044.05	29905	205
33.60	4880	60	37.10	10090	85	40.60	17845	140	44.10	30110	205
33.65	4940	60	37.15	10175	85	40.65	17985	140	44.15	30315	205
33.70	5000	65	37.20	10260	85	40.70	18125	140	44.20	30520	205
33.75	5065	65	37.25	10345	85	40.75	18265	140	44.25	30725	205
33.80	5130	65	37.30	10430	90	40.80	18405	140	44.30	30930	205
33.85	5195	65	37.35	10520	90	40.85	18545	140	44.35	31135	205
33.90	5260	65	37.40	10610	90	40.90	18685	145	44.40	31340	210
33.95	5325	65	37.45	10700	90	40.95	18830	145	44.45	31550	210
34.00	5390	65	37.50	10790	90	41.00	18975	145	44.50	31760	210
34.05	5455	65	37.55	10880	90	41.05	19120	150	44.55	31970	210
34.10	5520	65	37.60	10970	90	41.10	19270	150	44.60	32180	210
34.15	5585	65	37.65	11060	90	41.15	19420	150	44.65	32390	210
34.20	5650	70	37.70	11150	95	41.20	19570	150	44.70	32600	210
34.25	5720	70	37.75	11245	95	41.25	19720	155	44.75	32810	210
34.30	5790	70	37.80	11340	95	41.30	19875	155	44.80	33020	210
34.35	5860	70	37.85	11435	95	41.35	20030	155	44.85	33230	210
34.40	5930	70	37.90	11530	95	41.40	20185	155	44.90	33440	210
34.45	6000	70	37.95	11625	95	41.45	20340	160	44.95	33650	210
34.50	6070	70	38.00	11720	95	41.50	20500	160	45.00	33860	215
34.55	6140	70	38.05	11815	100	41.55	20660	160	45.05	34075	215
34.60	6210	70	38.10	11915	100	41.60	20820	160	45.10	34290	215
34.65	6280	70	38.15	12015	100	41.65	20980	160	45.15	34505	215
34.70	6350	70	38.20	12115	100	41.70	21140	165	45.20	34720	215
34.75	6420	70	38.25	12215	100	41.75	21305	165	45.25	34935	215
34.80	6490	70	38.30	12315	100	41.80	21470	165	45.30	35150	215
34.85	6560	70	38.35	12415	105	41.85	21635	165	45.35	35365	215
34.90	6630	75	38.40	12520	105	41.90	21800	170	45.40	35580	215
34.95	6705	75	38.45	12625	105	41.95	21970	170	45.45	35795	215
35.00	6780	75	38.50	12730	105	42.00	22140	170	45.50	36010	215
35.05	6855	75	38.55	12835	105	42.05	22310	170	45.55	36225	215
35.10	6930	75	38.60	12940	105	42.10	22480	175	45.60	36440	215
35.15	7005	75	38.65	13045	105	42.15	22655	175	45.65	36655	215
35.20	7080	75	38.70	13150	110	42.20	22830	175	45.70	36870	215
35.25	7155	75	38.75	13260	110	42.25	23005	175	45.75	37085	215
35.30	7230	75	38.80	13370	110	42.30	23180	175	45.80	37300	215
35.35	7305	75	38.85	13480	110	42.35	23355	180	45.85	37515	215
35.40	7380	75	38.90	13590	110	42.40	23535	180	45.90	37730	215
35.45	7455	75	38.95	13700	110	42.45	23715	180	45.95	37945	215
35.50	7530	75	39.00	13810	115	42.50	23895	180	46.00	38160	220
35.55	7605	75	39.05	13925	115	42.55	24075	185	46.05	38380	220
35.60	7680	75	39.10	14040	115	42.60	24260	185	46.10	38600	220
35.65	7755	75	39.15	14155	115	42.65	24445	185	46.15	38820	220
35.70	7830	75	39.20	14270	115	42.70	24630	185	46.20	39040	220
35.75	7905	75	39.25	14385	115	42.75	24815	185	46.25	39260	220
35.80	7980	80	39.30	14500	120	42.80	25000	190	46.30	39480	225
35.85	8060	80	39.35	14620	120	42.85	25190	190	46.35	39705	225
35.90	8140	80	39.40	14740	120	42.90	25380	190	46.40	39930	225
35.95	8220	80	39.45	14860	120	42.95	25570	190	46.45	40155	225
36.00	8300	80	39.50	14980	120	43.00	25760	190	46.50	40380	225
36.05	8380	80	39.55	15100	125	43.05	25950	190	46.55	40605	225
36.10	8460	80	39.60	15225	125	43.10	26140	190	46.60	40830	225
36.15	8540	80	39.65	15350	125	43.15	26330	195	46.65	41055	225
36.20	8620	80	39.70	15475	125	43.20	26525	195	46.70	41280	225
36.25	8700	80	39.75	15600	125	43.25	26720	195	46.75	41505	225
36.30	8780	80	39.80	15725	125	43.30	26915	195	46.80	41730	230
36.35	8860	80	39.85	15850	130	43.35	27110	195	46.85	41960	230
36.40	8940	80	39.90	15980	130	43.40	27305	195	46.90	42190	230
36.45	9020	80	39.95	16110	130	43.45	27500	200	46.95	42420	230
36.50	9100	80	40.00	16240	130	43.50	27700	200	47.00	42650	230
36.55	9180	80	40.05	16370	130	43.55	27900	200			
36.60	9260	80	40.10	16500	130	43.60	28100	200			
36.65	9340	80	40.15	16630	130	43.65	28300	200			
36.70	9420	80	40.20	16760	135	43.70	28500	200			
36.75	9500	80	40.25	16895	135	43.75	28700	200			
36.80	9580	85	40.30	17030	135	43.80	28900	200			
36.85	9665	85	40.35	17165	135	43.85	29100	200			
36.90	9750	85	40.40	17300	135	43.90	29300	200			
36.95	9835	85	40.45	17435	135	43.95	29500	200			
37.00	9920	85	40.50	17570	135	44.00	29700	205			

TABLE 93

RELATION BETWEEN LAKE STAGE AND OUTFLOW—ALL OUTLETS—LAKE OF THE WOODS IN STATE OF NATURE

Lake Level Sea-level Datum.	Discharge c.f.s.	Difference c.f.s.	Lake Level Sea-level Datum.	Discharge c.f.s.	Difference c.f.s.	Lake Level Sea-level Datum.	Discharge c.f.s.	Difference c.f.s.	Lake Level Sea-level Datum.	Discharge c.f.s.	Difference c.f.s.
1052.10	5500	130	1055.10	11130	240	1058.10	20210	400	1061.10	36505	670
1052.20	5630	140	1055.20	11370	240	1058.20	20610	410	1061.20	37175	675
1052.30	5770	140	1055.30	11610	240	1058.30	21020	420	1061.30	37850	680
1052.40	5910	150	1055.40	11850	250	1058.40	21440	430	1061.40	38530	690
1052.50	6060	150	1055.50	12100	250	1058.50	21870	440	1061.50	39220	690
1052.60	6210	160	1055.60	12350	260	1058.60	22310	450	1061.60	39910	700
1052.70	6370	160	1055.70	12610	260	1058.70	22760	460	1061.70	40610	710
1052.80	6530	160	1055.80	12870	260	1058.80	23220	480	1061.80	41320	720
1052.90	6690	160	1055.90	13130	265	1058.90	23700	490	1061.90	42040	720
1053.00	6850	165	1056.00	13395	265	1059.00	24190	500	1062.00	42760	720
1053.10	7015	170	1056.10	13660	270	1059.10	24690	500	1062.10	43480	730
1053.20	7185	180	1056.20	13930	280	1059.20	25190	510	1062.20	44210	730
1053.30	7365	180	1056.30	14210	280	1059.30	25700	520	1062.30	44940	730
1053.40	7545	180	1056.40	14490	280	1059.40	26220	530	1062.40	45670	730
1053.50	7725	180	1056.50	14770	290	1059.50	26750	540	1062.50	46400	.....
1053.60	7905	180	1056.60	15060	290	1059.60	27290	550			
1053.70	8085	190	1056.70	15350	300	1059.70	27840	560			
1053.80	8275	210	1056.80	15650	300	1059.80	28400	580			
1053.90	8485	210	1056.90	15950	320	1059.90	28980	590			
1054.00	8695	210	1057.00	16270	320	1060.00	29570	590			
1054.10	8905	210	1057.10	16590	330	1060.10	30160	600			
1054.20	9115	210	1057.20	16920	330	1060.20	30760	620			
1054.30	9325	210	1057.30	17250	340	1060.30	31380	620			
1054.40	9535	215	1057.40	17590	350	1060.40	32000	620			
1054.50	9750	220	1057.50	17940	365	1060.50	32620	620			
1054.60	9970	225	1057.60	18305	370	1060.60	33240	630			
1054.70	10195	230	1057.70	18675	370	1060.70	33870	640			
1054.80	10425	230	1057.80	19045	385	1060.80	34510	655			
1054.90	10655	235	1057.90	19430	390	1060.90	35165	670			
1055.00	10890	240	1058.00	19820	390	1061.00	35835	670			

TABLE 94.

RELATION BETWEEN LAKE STAGE AND OUTFLOW—EASTERN OUTLET—LAKE OF THE WOODS IN STATE OF NATURE

Lake Level Sea-level Datum	Discharge c.f.s.	Difference c.f.s.	Lake Level Sea-level Datum	Discharge c.f.s.	Difference c.f.s.	Lake Level Sea-level Datum	Discharge c.f.s.	Difference c.f.s.	Lake Level Sea-level Datum	Discharge c.f.s.	Difference c.f.s.
1052.10	400	20	1055.10	1190	40	1058.10	2530	50	1061.10	4710	110
1052.20	420	20	1055.20	1230	40	1058.20	2580	50	1061.20	4820	110
1052.30	440	20	1055.30	1270	40	1058.30	2630	50	1061.30	4930	110
1052.40	460	20	1055.40	1310	40	1058.40	2680	60	1061.40	5040	110
1052.50	480	20	1055.50	1350	40	1058.50	2740	60	1061.50	5150	120
1052.60	500	20	1055.60	1390	40	1058.60	2800	60	1061.60	5270	120
1052.70	520	20	1055.70	1430	40	1058.70	2860	60	1061.70	5390	120
1052.80	540	20	1055.80	1470	40	1058.80	2920	60	1061.80	5510	120
1052.90	560	20	1055.90	1510	40	1058.90	2980	60	1061.90	5630	120
1053.00	580	20	1056.00	1550	40	1059.00	3040	60	1062.00	5750	130
1053.10	600	20	1056.10	1590	40	1059.10	3100	60	1062.10	5880	130
1053.20	620	20	1056.20	1630	40	1059.20	3160	60	1062.20	6010	130
1053.30	640	20	1056.30	1670	40	1059.30	3220	60	1062.30	6140	130
1053.40	660	30	1056.40	1710	40	1059.40	3280	70	1062.40	6270	130
1053.50	690	30	1056.50	1750	40	1059.50	3350	70	1062.50	6400	.....
1053.60	720	30	1056.60	1790	40	1059.60	3420	70			
1053.70	750	30	1056.70	1830	50	1059.70	3490	70			
1053.80	780	30	1056.80	1880	50	1059.80	3560	70			
1053.90	810	30	1056.90	1930	50	1059.90	3630	70			
1054.00	840	30	1057.00	1980	50	1060.00	3700	80			
1054.10	870	30	1057.10	2030	50	1060.10	3780	80			
1054.20	900	30	1057.20	2080	50	1060.20	3860	90			
1054.30	930	30	1057.30	2130	50	1060.30	3950	90			
1054.40	960	30	1057.40	2180	50	1060.40	4040	90			
1054.50	990	30	1057.50	2230	50	1060.50	4130	90			
1054.60	1020	30	1057.60	2280	50	1060.60	4220	90			
1054.70	1050	30	1057.70	2330	50	1060.70	4310	95			
1054.80	1080	30	1057.80	2380	50	1060.80	4405	100			
1054.90	1110	40	1057.90	2430	50	1060.90	4505	100			
1055.00	1150	40	1058.00	2480	50	1061.00	4605	105			

TABLE 95

RATES OF DISCHARGE FOR 10 AND 11 DAY PERIODS EQUIVALENT TO VOLUME REPRESENTED BY GIVEN DEPTH ON RAINY LAKE

AREA 345 SQUARE MILES

Feet Depth on Lake	Rate of Discharge in Cu. Ft. per Sec.		Feet Depth on Lake	Rate of Discharge in Cu. Ft. per Sec.		Feet Depth on Lake	Rate of Discharge in Cu. Ft. per Sec.		Feet Depth on Lake	Rate of Discharge in Cu. Ft. per Sec.	
	For 10 days	For 11 days		For 10 days	For 11 days		For 10 days	For 11 days		For 10 days	For 11 days
0.01	111	101	0.46	5121	4655	0.91	10130	9209	1.36	15140	13763
0.02	222	202	0.47	5232	4756	0.92	10241	9310	1.37	15251	13864
0.03	333	304	0.48	5343	4858	0.93	10353	9412	1.38	15362	13966
0.04	445	405	0.49	5455	4969	0.94	10464	9513	1.39	15474	14067
0.05	556	506	0.50	5566	5060	0.95	10575	9614	1.40	15585	14168
0.06	667	607	0.51	5677	5161	0.96	10687	9715	1.41	15696	14269
0.07	779	708	0.52	5788	5262	0.97	10798	9816	1.42	15808	14370
0.08	890	810	0.53	5900	5364	0.98	10909	9918	1.43	15919	14472
0.09	1001	911	0.54	6011	5465	0.99	11021	10019	1.44	16030	14573
0.10	1113	1012	0.55	6122	5566	1.00	11132	10120	1.45	16142	14674
0.11	1224	1113	0.56	6233	5667	1.01	11243	10221	1.46	16253	14775
0.12	1335	1214	0.57	6346	5768	1.02	11354	10322	1.47	16364	14876
0.13	1447	1316	0.58	6457	5870	1.03	11466	10424	1.48	16476	14978
0.14	1558	1417	0.59	6568	5971	1.04	11577	10525	1.49	16587	15079
0.15	1669	1518	0.60	6679	6072	1.05	11688	10626	1.50	16698	15180
0.16	1780	1619	0.61	6790	6173	1.06	11799	10727	1.51	16809	15281
0.17	1892	1720	0.62	6901	6274	1.07	11911	10828	1.52	16921	15382
0.18	2003	1822	0.63	7013	6376	1.08	12022	10930	1.53	17032	15484
0.19	2114	1923	0.64	7124	6477	1.09	12133	11031	1.54	17143	15585
0.20	2226	2024	0.65	7235	6578	1.10	12245	11132	1.55	17255	15686
0.21	2337	2125	0.66	7347	6679	1.11	12356	11233	1.56	17366	15787
0.22	2448	2226	0.67	7458	6780	1.12	12467	11334	1.57	17477	15888
0.23	2560	2328	0.68	7569	6882	1.13	12579	11436	1.58	17589	15990
0.24	2671	2429	0.69	7680	6983	1.14	12690	11537	1.59	17700	16091
0.25	2782	2530	0.70	7792	7084	1.15	12801	11638	1.60	17811	16192
0.26	2893	2631	0.71	7903	7185	1.16	12913	11739	1.61	17922	16293
0.27	3005	2732	0.72	8014	7286	1.17	13024	11840	1.62	18033	16394
0.28	3116	2834	0.73	8126	7388	1.18	13135	11942	1.63	18145	16496
0.29	3227	2935	0.74	8237	7489	1.19	13247	12043	1.64	18256	16597
0.30	3339	3036	0.75	8348	7590	1.20	13358	12144	1.65	18367	16698
0.31	3450	3137	0.76	8460	7691	1.21	13470	12245	1.66	18479	16799
0.32	3561	3238	0.77	8571	7792	1.22	13581	12346	1.67	18590	16900
0.33	3673	3340	0.78	8682	7894	1.23	13692	12448	1.68	18701	17002
0.34	3784	3441	0.79	8793	7995	1.24	13804	12549	1.69	18813	17103
0.35	3895	3542	0.80	8905	8096	1.25	13915	12650	1.70	18924	17204
0.36	4007	3643	0.81	9016	8197	1.26	14027	12751	1.71	19035	17305
0.37	4118	3744	0.82	9128	8298	1.27	14138	12852	1.72	19147	17406
0.38	4229	3846	0.83	9240	8400	1.28	14250	12954	1.73	19258	17508
0.39	4341	3947	0.84	9351	8501	1.29	14361	13055	1.74	19369	17609
0.40	4453	4048	0.85	9462	8602	1.30	14472	13156	1.75	19481	17710
0.41	4564	4149	0.86	9573	8703	1.31	14583	13257	1.76	19592	17811
0.42	4675	4250	0.87	9685	8804	1.32	14694	13358	1.77	19703	17912
0.43	4787	4352	0.88	9796	8906	1.33	14806	13460	1.78	19815	18014
0.44	4898	4453	0.89	9908	9007	1.34	14917	13561	1.79	19926	18115
0.45	5009	4554	0.90	10019	9108	1.35	15028	13662	1.80	20037	18216

TABLE 96

RATES OF DISCHARGE FOR 30 AND 31 DAY PERIODS EQUIVALENT TO VOLUME REPRESENTED BY GIVEN DEPTH ON RAINY LAKE

AREA 345 SQUARE MILES

Feet Depth on Lake	Rate of Discharge in Cu. Ft. per Sec.		Feet Depth on Lake	Rate of Discharge in Cu. Ft. per Sec.		Feet Depth on Lake	Rate of Discharge in Cu. Ft. per Sec.		Feet Depth on Lake	Rate of Discharge in Cu. Ft. per Sec.	
	For 30 days	For 31 days		For 30 days	For 31 days		For 30 days	For 31 days		For 30 days	For 31 days
0.10	371	359	1.10	4082	3950	2.10	7793	7541	3.10	11503	11132
0.20	742	718	1.20	4452	4309	2.20	8164	7900	3.20	11874	11490
0.30	1113	1077	1.30	4824	4668	2.30	8535	8259	3.30	12245	11850
0.40	1484	1436	1.40	5195	5027	2.40	8904	8618	3.40	12616	12209
0.50	1855	1795	1.50	5566	5386	2.50	9277	8977	3.50	12987	12568
0.60	2226	2154	1.60	5937	5745	2.60	9648	9336	3.60	13360	12927
0.70	2598	2514	1.70	6308	6105	2.70	10019	9696	3.70	13730	13286
0.80	2969	2873	1.80	6680	6464	2.80	10390	10054	3.80	14101	13645
0.90	3340	3232	1.90	7051	6823	2.90	10761	10414	3.90	14472	14005
1.00	3711	3591	2.00	7421	7182	3.00	11132	10773	4.00	14843	14364
									4.10	15214	.....

TABLE 97

RELATION BETWEEN GAUGE HEIGHTS AT U. S. DOCK AND RATES OF DISCHARGE RAINY RIVER AT INTERNATIONAL FALLS AND FORT FRANCES

NO BACKWATER AT GAUGE

Gauge Height Feet	Discharge c. f. s.	Difference c. f. s.	Gauge Height Feet	Discharge c. f. s.	Difference c. f. s.	Gauge Height Feet	Discharge c. f. s.	Difference c. f. s.	Gauge Height Feet	Discharge c. f. s.	Difference c. f. s.
458.10	1290	60	461.60	4230	120	465.10	9680	200	468.60	17115	223
458.20	1350	60	461.70	4350	120	465.20	9880	200	468.70	17335	223
458.30	1410	60	461.80	4470	120	465.30	10080	200	468.80	17560	223
458.40	1470	60	461.90	4590	125	465.40	10280	200	468.90	17785	223
458.50	1530	60	462.00	4715	125	465.50	10480	200	469.00	18010	225
458.60	1590	65	462.10	4840	130	465.60	10680	200	469.10	18235	225
458.70	1655	65	462.20	4970	135	465.70	10880	200	469.20	18460	225
458.80	1720	65	462.30	5105	135	465.80	11080	200	469.30	18685	225
458.90	1785	65	462.40	5240	140	465.90	11280	200	469.40	18910	225
459.00	1850	70	462.50	5380	140	466.00	11480	205	469.50	19135	225
459.10	1920	70	462.60	5520	140	466.10	11685	205	469.60	19360	225
459.20	1990	70	462.70	5660	140	466.20	11890	205	469.70	19585	225
459.30	2060	70	462.80	5800	150	466.30	12095	205	469.80	19810	225
459.40	2130	75	462.90	5950	150	466.40	12300	210	469.90	20035	225
459.50	2205	75	463.00	6100	150	466.50	12510	210	470.00	20260	226
459.60	2280	80	463.10	6250	150	466.60	12720	215	470.10	20485	226
459.70	2360	80	463.20	6400	155	466.70	12935	215	470.20	20710	226
459.80	2440	80	463.30	6555	155	466.80	13150	215	470.30	20940	226
459.90	2520	80	463.40	6710	155	466.90	13365	215	470.40	21165	226
460.00	2600	90	463.50	6865	155	467.00	13580	220	470.50	21390	226
460.10	2690	90	463.60	7020	160	467.10	13800	220	470.60	21620	226
460.20	2780	90	463.70	7180	160	467.20	14020	220	470.70	21845	226
460.30	2870	90	463.80	7340	165	467.30	14240	220	470.80	22070	226
460.40	2960	95	463.90	7505	165	467.40	14460	220	470.90	22295	226
460.50	3055	95	464.00	7670	170	467.50	14680	220	471.00	22520	226
460.60	3150	100	464.10	7840	170	467.60	14900	220	471.10	22745	226
460.70	3250	100	464.20	8010	180	467.70	15120	220	471.20	22970	226
460.80	3350	100	464.30	8190	180	467.80	15340	220	471.30	23200	226
460.90	3450	100	464.40	8370	180	467.90	15560	220	471.40	23425	226
461.00	3550	110	464.50	8550	180	468.00	15780	223	471.50	23650	226
461.10	3660	110	464.60	8730	185	468.10	16000	223	471.60	23875	226
461.20	3770	115	464.70	8915	185	468.20	16225	223	471.70	24100	226
461.30	3885	115	464.80	9100	190	468.30	16445	223	471.80	24330	226
461.40	4000	115	464.90	9290	190	468.40	16670	223	471.90	24555	226
461.50	4115	115	465.00	9480	200	468.50	16890	223	472.00	24780	226

TABLE 98

RELATION BETWEEN LAKE STAGE AND OUTFLOW—RAINY LAKE

MEAN RELATIONSHIP ADOPTED FOR STATE OF NATURE

Gauge height Feet	Discharge c. f. s.	Difference c. f. s.	Gauge height Feet	Discharge c. f. s.	Difference c. f. s.	Gauge height Feet	Discharge c. f. s.	Difference c. f. s.	Gauge height Feet	Discharge c. f. s.	Difference c. f. s.
486.10	2360	70	489.10	5400	150	492.10	11430	225	495.10	18330	240
486.20	2430	75	489.20	5550	150	492.20	11655	225	495.20	18570	240
486.30	2505	75	489.30	5700	155	492.30	11880	225	495.30	18810	240
486.40	2580	75	489.40	5855	160	492.40	12105	225	495.40	19050	240
486.50	2655	75	489.50	6015	165	492.50	12330	225	495.50	19290	240
486.60	2730	75	489.60	6180	170	492.60	12555	225	495.60	19530	240
486.70	2805	75	489.70	6350	175	492.70	12780	225	495.70	19770	240
486.80	2880	80	489.80	6525	180	492.80	13005	225	495.80	20010	240
486.90	2960	85	489.90	6705	185	492.90	13230	230	495.90	20250	240
487.00	3045	85	490.00	6890	190	493.00	13460	230	496.00	20490	240
487.10	3130	90	490.10	7080	195	493.10	13690	230	496.10	20730	240
487.20	3220	90	490.20	7275	200	493.20	13920	230	496.20	20970	240
487.30	3310	90	490.30	7475	205	493.30	14150	230	496.30	21210	240
487.40	3400	95	490.40	7680	210	493.40	14380	230	496.40	21450	240
487.50	3495	95	490.50	7890	215	493.50	14610	230	496.50	21690	240
487.60	3590	100	490.60	8105	215	493.60	14840	230	496.60	21930	240
487.70	3690	100	490.70	8320	215	493.70	15070	230	496.70	22170	240
487.80	3790	105	490.80	8535	215	493.80	15300	230	496.80	22410	240
487.90	3895	105	490.90	8750	220	493.90	15530	230	496.90	22650	240
488.00	4000	110	491.00	8970	220	494.00	15760	230	497.00	22890	240
488.10	4110	115	491.10	9190	220	494.10	15990	230	497.10	23130	240
488.20	4225	115	491.20	9410	220	494.20	16220	230	497.20	23370	240
488.30	4340	120	491.30	9630	225	494.30	16450	230	497.30	23610	240
488.40	4460	125	491.40	9855	225	494.40	16680	235	497.40	23850	240
488.50	4585	125	491.50	10080	225	494.50	16915	235	497.50	24090	240
488.60	4710	130	491.60	10305	225	494.60	17150	235	497.60	24330	240
488.70	4840	135	491.70	10530	225	494.70	17385	235	497.70	24570	240
488.80	4975	140	491.80	10755	225	494.80	17620	235	497.80	24810	240
488.90	5115	140	491.90	10980	225	494.90	17855	235	497.90	25050	240
489.00	5255	145	492.00	11205	225	495.00	18090	240	498.00	25290	240

TABLE 1A

MONTHLY PRECIPITATION ON OR NEAR WATERSHED

RECORDS OF U. S. WEATHER BUREAU AND CANADIAN METEOROLOGICAL SERVICE

1872

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Duluth	0.86	0.46	0.85	1.80	4.62	4.46	5.84	2.84	5.01	0.42	2.48	0.48	30.12
Minneapolis	0.30	0.45	2.10	1.76	4.93	3.47	5.22	3.06	3.08	0.45	1.95	0.64	27.41
St. Paul	0.28	0.26	1.64	1.69	5.71	3.81	4.23	3.52	5.62	0.52	1.91	0.53	29.72
Breckenridge	.....	.....	.....	.....	4.05	5.10	6.01	1.78	1.18	2.17	1.03	1.41	.....
Pembina	0.28	0.25	0.15	2.00	1.90	2.09	3.09	0.82	1.67	1.16	0.53	2.95	17.19
Winnipeg	0.50	0.05	1.90	4.37	3.80	3.80	1.62	1.85	6.15	1.60	0.90	0.42	26.96

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	0.7	0.3	1.0	2.5	4.3	3.8	4.1	2.2	4.9	0.7	1.8	0.5	26.8
Lower Rainy	0.6	0.3	0.8	2.0	4.0	3.4	4.4	1.9	3.8	0.8	1.6	0.7	24.3
Lake of Woods	0.6	0.2	1.2	2.8	3.8	3.4	3.1	1.7	4.5	0.9	1.2	0.6	24.0

1873

Duluth	0.75	0.93	2.29	0.30	3.89	9.90	8.50	2.45	5.16	2.31	1.59	0.66	38.73
Minneapolis	1.83	1.55	1.05	2.85	5.69	4.91	2.99	3.33	2.28	3.06	1.03	5.30	35.87
St. Paul	1.31	1.54	1.34	2.44	5.63	7.74	3.83	4.61	2.37	2.57	0.79	0.38	34.55
Breckenridge	1.63	2.21	1.81	2.11	2.33	4.17	2.78	7.20	0.38	1.25	1.04	0.48	27.39
Pembina	0.41	0.75	0.35	0.39	2.11	2.91	1.30	2.38	2.05	0.56	0.66	0.18	14.05
Winnipeg	0.92	2.12	0.59	0.15	1.70	3.78	4.77	3.77	2.22	1.15	1.05	1.82	24.04

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	0.9	1.3	1.2	0.3	3.2	5.3	5.4	2.8	4.3	1.8	1.3	0.5	28.3
Lower Rainy	0.7	0.9	1.3	0.3	3.0	4.9	4.7	2.7	3.7	1.6	1.2	0.4	25.4
Lake of Woods	0.8	1.3	0.8	0.2	2.6	4.5	4.4	2.9	3.1	1.3	1.1	0.6	23.6

1874

Duluth	0.58	0.61	1.82	0.49	1.80	10.89	2.62	5.62	5.59	3.07	1.97	1.37	36.43
Minneapolis	0.65	0.92	1.84	0.76	1.61	9.68	1.64	3.43	4.54	2.50	1.12	5.02	33.71
St. Paul	0.49	1.07	2.24	0.95	1.65	11.67	1.94	3.90	5.76	3.22	1.90	0.72	35.51
Breckenridge	1.74	0.57	2.21	0.55	2.08	8.21	1.23	7.27	1.43	1.55	0.25	0.54	27.63
Pembina	0.26	0.25	0.35	0.20	1.55	3.41	1.40	2.21	1.51	0.29	0.30	0.12	11.88
Winnipeg	0.53	0.48	0.82	0.56	2.01	4.38	3.21	3.77	2.04	0.63	1.09	0.33	19.85

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	0.6	0.5	1.2	0.6	2.0	7.6	2.8	4.0	4.7	1.8	1.7	1.0	28.5
Lower Rainy	0.5	0.4	1.2	0.5	1.8	7.2	2.4	4.0	4.1	1.7	1.3	0.8	25.9
Lake of Woods	0.5	0.4	0.8	0.5	2.0	5.6	2.8	3.8	3.7	1.0	1.2	0.6	22.9

1875

Duluth	0.86	0.98	2.17	2.82	2.45	1.84	0.47	6.19	3.77	2.60	1.68	1.10	26.93
Minneapolis	0.82	1.45	2.12	2.73	3.42	4.57	1.12	7.51	2.67	1.09	0.88	1.65	30.03
St. Paul	1.41	1.72	2.19	2.27	3.06	4.33	0.82	8.74	2.16	1.56	0.84	1.56	30.66
Breckenridge	0.30	0.67	2.11	1.07	3.85	4.95	0.70	3.31	1.80	0.37	0.24	0.22	19.59
Pembina	0.04	0.03	0.05	0.47	1.87	3.83	1.18	2.62	0.92	1.26	0.70	0.56	13.53
Winnipeg	0.70	0.66	0.24	0.67	3.34	3.45	1.76	4.88	0.86	1.38	1.01	0.98	19.93

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	0.8	0.8	1.5	2.1	2.0	2.2	0.7	5.7	2.9	2.1	1.4	1.1	23.3
Lower Rainy	0.6	0.7	1.3	1.8	2.2	2.6	0.8	4.8	2.5	1.8	1.2	1.0	21.3
Lake of Woods	0.7	0.7	0.8	1.3	2.0	2.8	1.1	4.8	1.8	1.7	1.2	1.0	19.9

1876

Duluth	0.69	1.03	2.16	1.99	3.74	4.69	4.03	3.92	4.21	2.15	2.79	0.87	32.27
Minneapolis	1.25	0.80	1.60	3.30	3.66	2.73	2.14	5.94	2.67	2.88	0.93	0.85	24.52
St. Paul	0.73	0.66	1.43	2.23	3.15	2.02	2.73	5.28	2.99	1.27	0.93	0.25	23.67
Breckenridge	0.10	0.19	1.63	1.87	1.87	0.85	2.34	5.84	2.26	1.10	0.02	0.06	18.13
Pembina	0.17	0.53	1.09	0.49	6.55	3.43	5.52	6.47	0.54	0.14	0.39	0.43	25.75
Winnipeg	1.02	1.41	1.24	0.46	3.05	4.50	3.31	9.42	1.36	0.66	2.55	0.72	29.70

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	0.8	1.1	1.8	1.0	3.3	4.5	3.5	4.6	3.2	1.4	2.0	0.8	28.0
Lower Rainy	0.6	1.0	1.7	1.2	4.7	4.4	4.4	5.0	2.6	1.2	1.7	0.7	29.2
Lake of Woods	0.7	1.1	1.6	0.6	3.8	4.5	3.7	5.5	2.0	0.8	1.8	0.7	26.8

TABLE 1A—Continued

MONTHLY PRECIPITATION ON OR NEAR WATERSHED

RECORDS OF U. S. WEATHER BUREAU AND CANADIAN METEOROLOGICAL SERVICE

1877

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Port Arthur	.....	.....	.....	.....	.....	.....	2.44	3.40	4.49	2.28	1.80	1.40	.....
Duluth	1.45	0.10	0.79	1.20	7.24	4.89	3.57	1.48	5.67	4.92	1.05	1.95	34.31
Minneapolis	0.92	* T.	1.93	2.42	4.00	5.09	0.43	2.02	2.71	3.42	1.42	1.03	25.39
St. Paul	0.55	0.01	1.57	1.92	5.43	7.13	0.52	2.83	2.56	3.62	1.24	1.42	28.80
Breckenridge	0.03	0.01	0.30	2.08	2.81	7.44	6.54	3.36	2.50	2.85	0.29	1.17	29.38
Pembina	0.06	0.10	1.13	0.68	4.15	9.85	1.47	0.51	1.40	0.69	0.55	1.08	21.67
Winnipeg	0.42	0.11	1.08	1.28	5.39	5.69	3.24	0.83	3.02	0.78	0.70	2.23	24.77

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	1.2	0.1	0.9	1.1	6.4	5.2	2.7	2.4	4.3	2.6	1.3	1.7	29.9
Lower Rainy	1.0	0.1	0.9	0.9	5.9	6.8	2.6	1.5	3.8	2.8	0.9	1.7	28.9
Lake of Woods	0.8	0.1	1.0	1.0	5.7	6.3	2.5	1.6	3.4	1.5	1.0	1.9	26.8

1878

Port Arthur	0.35	0.85	1.15	4.82	3.49	2.37	0.81	2.00	4.97	3.05	0.53	0.09	24.48
Duluth	0.55	0.32	1.34	5.18	2.83	4.81	2.53	0.52	4.68	3.55	0.69	1.09	28.09
Minneapolis	0.88	0.52	1.53	2.31	3.40	3.00	3.63	1.81	2.51	1.52	0.31	0.52	21.94
St. Paul	1.00	0.67	1.24	2.43	2.33	3.58	4.47	1.43	2.13	1.85	0.61	1.04	22.78
Breckenridge	0.06	0.18	4.07	7.77	2.77	7.01	3.82	3.83	1.49	3.18	1.38	0.16	35.72
Pembina	0.12	0.26	4.50	5.78	2.52	3.57	4.57	3.01	1.95	6.61	0.32	0.62	33.83
Winnipeg	0.30	1.20	2.49	3.98	3.76	3.99	5.47	1.53	1.80	3.18	0.22	1.40	29.32

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	0.4	0.7	1.7	4.8	3.3	3.3	2.4	1.5	4.1	3.3	0.5	0.6	26.6
Lower Rainy	0.4	0.5	2.4	5.2	3.0	4.0	3.2	1.7	3.5	3.8	0.6	0.9	29.2
Lake of Woods	0.3	0.8	2.3	4.6	3.4	3.6	3.8	1.7	3.1	3.6	0.4	1.0	28.6

1879

Port Arthur	0.78	0.22	2.81	2.82	4.50	2.09	2.66	1.37	4.16	2.20	1.42	2.39	27.42
Duluth	0.72	1.46	1.91	0.90	7.99	5.57	10.42	1.58	5.24	3.95	1.65	3.89	45.28
Minneapolis	0.14	1.70	1.02	0.88	6.21	1.61	6.26	1.27	1.91	2.52	1.21	2.24	26.97
St. Paul	0.11	1.12	0.97	0.45	7.18	1.76	9.32	2.78	2.26	2.56	1.41	2.47	32.39
Breckenridge	0.05	0.40	0.25	1.04	5.42	2.68	3.78	2.04	2.36	0.79	0.29	0.66	19.76
Pembina	0.58	0.98	0.94	0.34	1.54	3.90	3.01	0.90	1.18	3.38	0.34	2.22	19.31
Winnipeg	1.67	0.65	0.64	2.24	2.78	6.98	5.22	1.82	0.72	1.38	0.42	2.42	26.94

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	0.8	0.6	2.1	2.1	4.5	4.0	4.0	1.5	3.5	2.5	1.2	2.5	29.3
Lower Rainy	0.7	1.0	1.6	1.3	4.8	4.8	4.2	1.4	3.3	3.4	1.1	2.5	30.1
Lake of Woods	0.9	0.6	1.4	2.0	3.5	5.1	4.1	1.5	2.1	2.2	0.8	2.4	26.6

1880

Port Arthur	1.16	2.77	1.04	2.07	3.58	4.44	2.91	2.27	4.47	2.89	1.66	0.32	29.58
Duluth	1.21	1.57	2.43	3.17	4.31	10.40	1.98	4.35	1.86	2.32	2.89	1.62	38.11
Minneapolis	0.94	1.00	1.76	1.66	3.11	4.80	2.48	2.77	0.70	0.59	1.68	0.74	22.23
St. Paul	0.81	0.97	2.30	1.58	2.63	5.55	2.75	3.63	1.74	2.18	2.93	2.69	29.76
Breckenridge	0.01	0.00	1.49	2.23	5.84	7.90	2.52	3.67	0.68	1.78	0.73	0.75	27.60
Pembina	0.43	0.20	0.32	0.59	7.98	4.98	4.75	4.34	2.19	2.69	0.07	0.73	29.27
Winnipeg	1.04	1.86	0.48	0.45	5.88	3.52	2.74	4.06	4.13	1.72	0.24	1.23	27.35

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	1.1	2.2	1.2	1.8	4.5	5.0	2.8	3.2	3.8	2.5	1.6	0.9	30.6
Lower Rainy	1.0	1.5	1.3	1.9	5.4	6.2	3.3	4.0	2.6	2.5	1.6	1.2	32.5
Lake of Woods	1.0	1.9	0.8	1.1	5.4	4.2	3.0	3.6	3.9	2.2	0.8	1.0	28.9

* T. denotes trace.

TABLE 1A—Continued

MONTHLY PRECIPITATION ON OR NEAR WATERSHED

RECORDS OF U. S. WEATHER BUREAU AND CANADIAN METEOROLOGICAL SERVICE

1881

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Port Arthur	0.24	0.84	0.20	1.01	3.26	1.74	2.71	2.97	7.38	2.76	3.01	0.54	26.66
Duluth	1.65	1.79	1.46	1.10	1.77	2.52	1.84	7.36	11.52	3.77	2.58	0.20	37.56
Minneapolis	1.49	2.45	0.92	0.53	4.60	3.71	1.48	4.00	9.90	3.04	2.20	0.35	34.67
St. Paul	4.31	2.65	1.06	0.47	4.34	2.87	2.60	4.55	9.95	4.44	1.36	0.53	39.16
Moorhead	0.60	2.13	0.62	0.77	2.80	5.59	1.97	5.89	4.75	2.75	1.41	0.20	29.48
Pembina	0.13	0.56	0.08	0.81	4.00	3.47	0.48	1.96	1.99	1.30	0.48	0.25	15.51
Winnipeg	0.15	3.93	0.63	0.76	2.07	2.66	0.87	1.82	2.60	1.50	2.79	0.35	20.13

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	0.5	1.2	0.5	1.0	2.7	2.2	2.0	3.4	6.8	2.6	2.8	0.4	26.1
Lower Rainy	0.6	1.2	0.8	1.0	2.8	2.6	1.3	4.2	6.2	2.6	2.6	0.3	26.2
Lake of Woods	0.2	1.5	0.4	0.9	2.7	2.5	1.4	2.4	4.4	2.0	2.8	0.4	21.6

1882

Port Arthur	1.44	2.33	1.54	1.07	1.41	2.17	3.06	1.46	1.35	3.88	0.92	0.72	21.35
Duluth	0.57	2.02	3.05	2.51	7.14	6.72	4.92	3.47	1.29	3.56	1.66	1.11	38.02
Minneapolis	0.50	1.42	1.10	2.69	3.99	2.69	2.46	2.23	0.15	1.91	1.80	2.01	22.95
St. Paul	0.67	2.35	3.25	1.61	2.44	2.68	2.84	2.45	0.27	1.99	1.61	0.98	23.14
Moorhead	1.34	0.80	2.83	1.69	5.32	5.43	4.92	2.50	1.23	4.04	2.54	1.37	34.01
Pembina	0.74	0.83	1.66	0.90	2.94	3.35	3.79	0.42	1.51	4.60	1.02	0.72	22.48
Winnipeg	1.26	1.77	2.58	0.47	1.58	1.45	7.10	1.51	1.01	3.79	1.06	2.00	25.58

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	1.2	2.1	2.0	1.2	2.7	3.0	3.9	1.8	1.3	3.8	1.1	1.0	25.1
Lower Rainy	0.8	1.8	2.2	1.5	4.0	4.2	4.2	1.9	1.3	3.9	1.2	0.9	27.9
Lake of Woods	1.2	1.8	2.2	0.9	2.0	2.3	5.0	1.4	1.2	3.9	1.0	1.3	24.2

1883

Port Arthur	1.08	0.60	1.41	0.11	0.90	4.14	3.24	1.88	1.54	1.89	4.15	1.81	22.75
Duluth	1.12	0.78	0.38	1.20	2.07	4.11	2.48	0.98	2.21	3.19	1.63	3.02	23.20
Minneapolis	2.22	0.92	0.32	3.83	2.53	6.59	4.43	0.47	1.99	3.08	0.68	1.82	28.88
St. Paul	0.64	0.44	0.06	4.92	2.12	7.04	4.33	1.22	2.23	1.10	1.01	1.59	26.70
Moorhead	1.19	0.74	0.38	1.65	3.59	2.32	4.57	3.16	2.51	3.22	0.16	1.47	24.96
Pembina	0.33	0.24	0.11	0.73	2.13	1.03	2.16	5.16	1.57	3.90	0.26	0.26	17.88
Winnipeg	0.65	0.68	0.29	1.02	1.35	3.48	1.77	2.96	1.96	3.68	1.25	0.92	20.01

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	1.0	0.7	0.9	0.6	1.3	3.8	2.7	2.2	1.7	2.7	2.3	1.7	21.6
Lower Rainy	0.8	0.6	0.4	0.9	1.8	3.4	2.5	2.6	1.8	3.4	1.3	1.5	21.0
Lake of Woods	0.8	0.6	0.6	0.8	1.3	3.5	2.3	2.8	1.7	3.2	1.6	1.3	20.5

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Port Arthur	0.89	1.08	1.90	1.42	2.47	1.07	1.92	4.23	4.41	4.35	0.73	1.29	25.76
Duluth	0.67	2.71	1.32	3.64	5.17	1.13	3.45	6.92	4.70	3.47	0.95	1.22	35.35
Minneapolis	0.73	2.22	0.95	1.73	2.99	4.18	1.65	3.91	5.27	1.17	0.66	2.31	27.77
St. Paul	0.48	1.27	1.34	2.00	2.09	3.57	2.93	2.89	4.48	2.43	0.65	1.98	26.11
Moorhead	0.55	1.32	1.03	1.23	1.75	1.84	7.32	6.17	2.49	3.70	0.34	0.76	28.50
Pembina	0.14	0.24	0.38	0.80	1.11	2.63	3.47	7.18	3.44	1.15	0.42	0.85	21.81
Winnipeg	0.61	1.37	1.20	2.69	0.87	2.97	1.32	6.91	3.75	1.52	0.83	1.11	25.15

AVERAGE MONTHLY PRECIPITATION ON WATERSHED SUBDIVISIONS

Upper Rainy	0.8	1.3	1.6	2.2	2.2	1.6	2.4	5.5	4.3	3.4	0.8	1.2	27.3
Lower Rainy	0.6	1.2	1.3	2.3	1.9	1.8	3.3	6.3	4.0	2.8	0.7	1.1	27.3
Lake of Woods	0.6	1.1	1.3	2.1	1.5	2.3	2.2	6.2	3.9	2.4	0.8	1.1	25.5

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—KEEWATIN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

JANUARY 1915 — FEBRUARY

Date	Footnote	Local Datum			Sea-level Datum			Footnote	Local Datum			Sea-level Datum		
		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1		98.80	99.70	76.55	1060.40	1060.77	1036.89		.....	99.70	76.45	.....	1060.77	1036.79
2		.....	99.70	76.40	.....	60.77	36.74		98.80	99.70	76.75	1060.40	60.77	37.09
3		.....	99.70	76.35	.....	60.77	36.69		.....	99.70	76.75	.....	60.77	37.09
4		98.80	99.70	76.35	60.40	60.77	36.69		98.80	99.70	76.75	60.40	60.77	37.09
5		.....	99.70	76.55	.....	60.77	36.89		.....	99.70	76.80	.....	60.77	37.14
6		98.80	99.70	76.60	60.40	60.77	36.94		98.80	99.70	76.80	60.40	60.77	37.14
7		.....	99.70	76.65	.....	60.77	36.99		98.80	99.70	76.75	60.40	60.77	37.09
8		98.80	99.70	76.70	60.40	60.77	37.04		.....	99.70	76.45	.....	60.77	36.79
9		.....	99.70	76.70	.....	60.77	37.04		98.80	99.70	76.75	60.40	60.77	37.09
10		98.80	99.70	76.65	60.40	60.77	36.99		.....	99.70	76.80	.....	60.77	37.14
11		.....	99.70	76.40	.....	60.77	36.74		98.80	99.70	76.80	60.40	60.77	37.14
12		98.80	99.70	76.65	60.40	60.77	36.99		.....	99.70	76.80	.....	60.77	37.14
13		.....	99.70	76.65	.....	60.77	36.99		.....	99.70	76.80	.....	60.77	37.14
14		98.80	99.70	76.70	60.40	60.77	37.04		98.80	99.70	76.75	60.40	60.77	37.09
15		.....	99.70	76.75	.....	60.77	37.09		98.80	99.70	76.45	60.40	60.77	36.79
16		98.80	99.70	76.75	60.40	60.77	37.09		.....	99.70	76.75	.....	60.77	37.09
17		.....	99.70	76.70	.....	60.77	37.04		98.80	99.70	76.80	60.40	60.77	37.14
18		98.80	99.70	76.45	60.40	60.77	36.79		98.80	99.70	76.80	60.40	60.77	37.14
19		.....	99.70	76.70	.....	60.77	37.04		.....	99.70	76.80	.....	60.77	37.14
20		98.80	99.70	76.75	60.40	60.77	37.09		98.80	99.70	76.80	60.40	60.77	37.14
21		.....	99.70	76.80	.....	60.77	37.14		.....	99.70	76.70	.....	60.77	37.04
22		98.80	99.70	76.80	60.40	60.77	37.14		98.80	99.70	76.45	60.40	60.77	36.79
23		.....	99.70	76.80	.....	60.77	37.14		.....	99.70	76.70	.....	60.77	37.04
24		98.80	99.70	76.70	60.40	60.77	37.04		98.80	99.70	76.75	60.40	60.77	37.09
25		98.80	99.70	76.45	60.40	60.77	36.79		.....	99.70	76.75	.....	60.77	37.09
26		.....	99.70	76.70	.....	60.77	37.04		98.80	99.70	76.80	60.40	60.77	37.14
27		98.80	99.70	76.80	60.40	60.77	37.14		.....	99.70	76.85	.....	60.77	37.19
28		.....	99.70	76.80	.....	60.77	37.14		98.80	99.70	76.60	60.40	60.77	36.94
29		98.80	99.70	76.85	60.40	60.77	37.19		.....	.....	.....	.....	.....	.....
30		.....	99.70	76.85	.....	60.77	37.19		.....	.....	.....	.....	.....	.....
31		98.80	99.70	76.80	60.40	60.77	37.14		.....	.....	.....	.....	.....	.....

MARCH 1915 — APRIL

1		.....	99.70	76.45	.....	1060.77	1036.79	4	98.70	99.65	76.40	1060.30	1060.72	1036.74
2		98.75	99.65	76.60	1060.35	60.72	36.94		98.65	99.60	76.35	60.25	60.67	36.69
3		.....	99.65	76.70	.....	60.72	37.04		.....	99.60	76.30	.....	60.67	36.64
4		98.75	99.65	76.70	60.35	60.72	37.04		98.65	99.60	76.25	60.25	60.67	36.59
5		.....	99.65	76.70	.....	60.72	37.04		.....	99.65	76.15	.....	60.72	36.49
6		98.75	99.65	76.75	60.35	60.72	37.09		98.75	99.65	76.15	60.35	60.72	36.49
7		.....	99.65	76.50	.....	60.72	36.84	5	98.50	99.65	76.15	60.10	60.72	36.49
8		98.70	99.65	76.35	60.30	60.72	36.69	6	98.10	99.65	76.50	59.70	60.72	36.84
9		.....	99.65	76.65	.....	60.72	36.99		98.00	99.65	77.75	59.60	60.72	38.09
10		98.70	99.65	76.70	60.30	60.72	37.04		98.00	99.65	78.20	59.60	60.72	38.54
11		.....	99.65	76.55	.....	60.72	36.89		.....	99.65	78.30	.....	60.72	38.64
12		98.70	99.65	76.50	60.30	60.72	36.84		98.00	99.65	78.40	59.60	60.72	38.74
13		.....	99.65	76.45	.....	60.72	36.79		.....	99.65	78.75	.....	60.72	39.09
14		98.70	99.65	76.25	60.30	60.72	36.59		98.00	99.65	78.80	59.60	60.72	39.14
15	1	.....	99.65	76.20	.....	60.72	36.54		.....	99.65	78.85	.....	60.72	39.19
16		98.70	99.65	76.30	60.30	60.72	36.64		98.05	99.65	78.95	59.65	60.72	39.29
17		.....	99.65	76.30	.....	60.72	36.64		98.05	99.65	79.00	59.65	60.72	39.34
18		98.70	99.65	76.30	60.30	60.72	36.64		.....	99.65	78.85	.....	60.72	39.19
19		.....	99.60	76.30	.....	60.67	36.64		98.05	99.65	78.75	59.65	60.72	39.09
20		98.70	99.60	76.30	60.30	60.67	36.64		98.05	99.65	79.05	59.65	60.72	39.39
21	2	.....	99.60	76.25	.....	60.67	36.59		.....	99.65	79.10	.....	60.72	39.44
22	3	98.70	99.65	76.15	60.30	60.72	36.49		98.05	99.60	79.20	59.65	60.67	39.54
23		.....	99.65	76.20	.....	60.72	36.54		.....	99.60	79.25	.....	60.67	39.59
24		98.70	99.65	76.20	60.30	60.72	36.54		98.05	99.70	79.30	59.65	60.77	39.64
25		.....	99.65	76.25	.....	60.72	36.59		.....	99.70	79.25	.....	60.77	39.59
26		98.70	99.65	76.30	60.30	60.72	36.64		98.05	99.70	79.15	59.65	60.77	39.49
27		.....	99.65	76.30	.....	60.72	36.64		.....	99.75	79.35	.....	60.82	39.69
28		98.70	99.65	76.25	60.30	60.72	36.59		98.05	99.60	79.40	59.65	60.67	39.74
29		.....	99.65	76.10	.....	60.72	36.44		.....	99.65	79.45	.....	60.72	39.79
30		98.70	99.65	76.45	60.30	60.72	36.79		98.05	99.65	79.50	59.65	60.72	39.84
31		.....	99.65	76.55	.....	60.72	36.84		.....	.....	.....	.....	.....	.....

1. "A" mill been closed down from the 15th to the 22nd. (S.) 2. Mill "C" closed 21st, 6 p. m. (S.) 3. Mill "A" started up 22nd, 7 a. m. (S.) 4. Weather clear and dry from 1st to 16th. Both mills running from 1st to 16th. (S.) 5. From January 1st, 1915, till April 7th, 1915, 10 logs were out of Dam. April 7, 12 logs removed. (S.) 6. April 8, 31 logs removed. Total number out 53.—3 logs lost. (S.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—KEEWATIN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	Footnote	May 1915 Local Datum Above Dam	Lake	Tail Water	May 1915 Sea-level Datum Above Dam	Lake	Tail Water	Footnote	June 1915 Local Datum Above Dam	Lake	Tail Water	June 1915 Sea-level Datum Above Dam	Lake	Tail Water
1		98.05	99.65	79.10	1059.65	1060.72	1039.74		97.30	99.95	80.65	1058.90	1061.02	1040.99
2		98.05	99.65	79.05	59.65	60.72	39.39			99.90	80.60		60.97	40.94
3			99.75	79.30		60.82	39.64		97.20	99.85	80.60	58.80	60.92	40.94
4		98.10	99.75	79.40	59.70	60.82	39.74		97.20	99.90	80.60	58.80	60.97	40.94
5			99.70	79.40		60.77	39.74			100.05	80.65		61.12	40.99
6		98.10	99.65	79.45	59.70	60.72	39.79		97.10	99.75	80.55	58.70	60.82	40.89
7			99.70	79.50		60.77	39.84		97.10	99.80	80.40	58.70	60.87	40.74
8	1	98.00	99.50	79.40	59.60	60.57	39.74			99.75	80.55		60.82	40.89
9	2	98.20	99.90	79.40	59.80	60.97	39.74		97.10	99.90	80.60	58.70	60.97	40.94
10			99.80	79.35		60.87	39.69			99.90	80.65		60.97	40.99
11		98.15	99.90	79.45	59.75	60.97	39.79		97.10	99.80	80.70	58.70	60.87	41.04
12			99.90	79.50		60.97	39.84			99.85	80.70		60.92	41.04
13		98.15	99.90	79.55	59.75	60.97	38.89		97.10	99.85	80.70	58.70	60.92	41.04
14		98.20	99.90	79.55	59.80	60.97	39.89			99.95	80.60		61.02	40.94
15			99.85	79.55		60.92	39.89		97.10	99.95	80.65	58.70	61.02	40.99
16		98.10	99.75	79.45	59.70	60.82	39.79			99.95	80.65		61.02	40.99
17		98.15	99.85	79.25	59.75	60.92	39.59		97.25	100.05	80.65	58.85	61.12	40.99
18		97.60	99.90	80.00	59.20	60.97	40.34			99.90	80.75		60.97	41.09
19		96.25	100.00	80.60	57.85	61.07	40.94		97.35	100.05	80.80	58.95	61.12	41.14
20	3	96.00	99.95	81.10	57.60	61.02	41.44			100.20	80.80		61.27	41.14
21	4	95.70	99.95	81.55	57.30	61.02	41.89		97.45	100.25	80.75	59.05	61.32	41.09
22		96.90	100.00	81.40	58.50	61.07	41.74			100.15	80.85		61.22	41.19
23			100.05	80.90		61.12	41.24		97.55	100.35	80.95	59.15	61.42	41.29
24		97.10	100.00	80.70	58.70	61.07	41.04			100.25	80.95		61.32	41.29
25			99.85	80.75		60.92	41.09		97.60	100.35	81.05	59.20	61.42	41.39
26		97.20	99.95	80.75	58.80	61.02	41.09			100.30	81.00		61.37	41.34
27		97.35	100.00	80.80	58.95	61.07	41.14		97.80	100.50	80.90	59.40	61.57	41.24
28			100.00	80.80		61.07	41.14	5	97.80	100.50	81.00	59.40	61.57	41.34
29		97.35	99.90	80.80	58.95	60.97	41.14		97.25	100.55	81.45	58.85	61.62	41.79
30			99.90	80.70		60.97	41.04		97.00	100.60	81.85	58.60	61.67	42.19
31			99.95	80.55		61.02	40.89							

Date	Footnote	July 1915 Local Datum Above Dam	Lake	Tail Water	July 1915 Sea-level Datum Above Dam	Lake	Tail Water	Footnote	August 1915 Local Datum Above Dam	Lake	Tail Water	August 1915 Sea-level Datum Above Dam	Lake	Tail Water
1			100.60	81.90		1061.67	1042.24		95.60	100.15	82.55	1057.20	1061.22	1042.89
2			100.65	81.95		61.72	42.29			100.15	82.40		61.22	42.74
3		96.90	100.60	82.00	1058.50	61.67	42.34		95.60	100.15	82.50	57.20	61.22	42.84
4			100.45	82.00		61.52	42.34			100.05	82.45		61.12	42.79
5			100.55	82.00		61.62	42.34		95.60	100.05	82.45	57.20	61.12	42.79
6		96.80	100.65	82.10	58.40	61.72	42.44			100.00	82.45		61.07	42.79
7		96.80	100.60	82.10	58.40	61.67	42.44		95.60	100.00	82.45	57.20	61.07	42.79
8			100.65	82.20		61.72	42.54		95.60	100.00	82.40	57.20	61.07	42.74
9		96.95	100.70	82.25	58.55	61.77	42.59	7	95.80	100.00	82.25	57.40	61.07	42.54
10		96.95	100.75	82.35	58.55	61.82	42.69		96.50	100.00	82.10	58.10	61.07	42.44
11			100.70	82.30		61.77	42.64		96.50	100.00	82.00	58.10	61.07	42.34
12		96.90	100.70	82.25	58.50	61.77	42.59		96.50	99.95	82.00	58.10	61.02	42.34
13		96.90	100.70	82.30	58.50	61.77	42.64	8	96.40	99.90	81.90	58.00	60.97	42.24
14			100.50	82.25		61.57	42.59		96.20	99.85	81.95	57.80	60.92	42.29
15		96.90	100.60	82.25	58.50	61.67	42.59		96.10	99.85	81.90	57.70	60.92	42.24
16			100.65	82.25		61.72	42.59	9	96.00	99.65	81.70	57.60	60.72	42.04
17		96.90	100.45	82.25	58.50	61.52	42.59			99.80	81.80		60.87	42.14
18		96.85	100.55	82.20	58.45	61.62	42.54	10	96.20	99.75	81.75	57.80	60.82	42.09
19			100.50	82.05		61.57	42.39		96.30	99.70	81.70	57.90	60.77	42.04
20		96.80	100.45	82.15	58.40	61.52	42.49		97.10	99.70	81.60	58.70	60.77	41.94
21		96.80	100.50	82.15	58.40	61.57	42.49		98.20	99.70	81.90	59.80	60.77	41.84
22		96.80	100.55	82.15	58.40	61.62	42.49		98.30	99.70	80.00	59.90	60.77	40.34
23			100.30	82.15		61.37	42.49			99.50	79.70		60.57	40.04
24	6	96.80	100.40	82.20	58.40	61.47	42.54		98.40	99.45	79.35	60.00	60.52	39.69
25		96.30	100.45	82.30	57.90	61.52	42.64			99.40	79.20		60.47	39.54
26		96.00	100.40	82.30	57.60	61.47	42.64		98.45	99.65	78.60	60.05	60.72	38.94
27		95.70	100.35	82.35	57.30	61.42	42.89			99.70	78.40		60.77	38.74
28			100.40	82.60		61.47	42.94		98.50	99.45	78.25	60.10	60.52	38.59
29		95.70	100.35	82.65	57.30	61.42	42.99			99.55	78.05		60.62	38.39
30			100.30	82.60		61.37	42.94		98.50	99.60	77.90	60.10	60.67	37.84
31		95.60	100.20	82.60	57.20	61.27	42.94			99.65	77.80		60.72	37.94

1. May 8, Cold north wind. (S.) 2. May 9, Heavy west wind. Moderate weather from 10th 16th. (S.) 3. Taken out up till 20th, 134 logs. Between 17th and 20th logs were removed to enable S. S. Scovil of the Department of the Interior to measure flow of water above and below the Norman Dam. (S.) 4. Put in from 21st to 22nd, 51 logs. Leaving out at the present time 83 logs. (S.) 5. Removed 32 logs from 28th to 29th. Total number out 115 logs. (S.) 6. Removed 27 logs from 24th to 26th. 141 logs out. One log fell off Dam. (S.) 7. Put in on 9th of August 23 logs. (S.) 8. Ta en out 8 logs, August 13th. 126 logs out. (S.) 9. August 16, Heavy northeast wind. (S.) 10. Put in 107 logs from 18th to 25th. (S.)

TABLE 7—Continued

WATER LEVELS—LAKE OF THE WOODS—KEEWATIN, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, ONTARIO

Date	SEPTEMBER 1915							OCTOBER					
	Footnote	Local Datum			Sea-level Datum			Footnote	Local Datum			Sea-level Datum		
		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water		Above Dam	Lake	Tail Water	Above Dam	Lake	Tail Water
1		98.50	99.50	77.90	1060.10	1060.57	1038.24		98.75	99.25	77.30	1060.35	1060.32	1037.64
2		.....	99.60	78.00	.....	60.67	38.34		98.75	99.35	77.15	60.35	60.42	37.49
3		98.50	99.55	78.10	60.10	60.62	38.44		.....	99.20	77.00	.....	60.27	37.34
4		98.50	99.50	78.00	60.10	60.57	38.34		98.60	98.85	76.55	60.20	59.92	36.89
5		.....	99.60	77.90	.....	60.67	38.24		.....	99.45	76.80	.....	60.52	37.14
6		98.45	99.50	77.70	60.05	60.57	38.04	2	98.65	98.90	76.90	60.25	59.97	37.24
7		.....	99.40	77.90	.....	60.47	38.24		.....	98.78	76.80	.....	59.85	37.14
8		98.45	99.55	77.95	60.05	60.62	38.29		98.70	99.00	76.73	60.30	60.07	37.07
9		98.40	99.50	77.95	60.00	60.57	38.29		.....	99.50	76.80	.....	60.57	37.14
10		98.30	99.35	77.95	59.90	60.42	38.29		98.90	99.20	76.59	60.50	60.27	36.93
11		.....	99.30	77.90	.....	60.37	38.24		.....	99.15	76.50	.....	60.22	36.84
12		98.30	99.35	77.80	59.90	60.42	38.14		98.95	99.38	76.65	60.55	60.45	36.99
13		.....	99.25	77.60	.....	60.32	37.94		.....	99.15	76.68	.....	60.22	37.02
14		98.25	99.20	77.80	59.85	60.27	38.14		98.90	99.20	76.70	60.50	60.27	37.04
15		.....	99.55	77.90	.....	60.62	38.24		.....	99.25	76.70	.....	60.32	37.04
16		98.35	99.30	77.95	59.95	60.37	38.29		98.90	99.20	76.70	60.50	60.27	37.04
17		98.40	99.40	77.85	60.00	60.47	38.19		.....	99.25	76.65	.....	60.32	36.99
18		.....	99.15	77.90	.....	60.22	38.24		98.90	99.20	76.48	60.50	60.27	36.82
19		98.30	99.35	77.85	59.90	60.42	38.19		.....	99.30	76.55	.....	60.37	36.89
20		97.90	98.70	77.60	59.50	59.77	37.94		98.90	99.20	76.50	60.50	60.27	36.84
21		.....	99.25	77.75	.....	60.32	38.09		.....	99.12	76.58	.....	60.19	36.92
22		98.35	99.45	77.90	59.95	60.52	38.24		98.85	99.05	76.63	60.45	60.12	36.97
23		.....	99.20	77.85	.....	60.27	38.19		.....	99.10	76.60	.....	60.17	36.94
24		98.20	99.15	77.80	59.80	60.22	38.14		98.80	99.18	76.60	60.40	60.25	36.94
25		.....	99.15	77.85	.....	60.22	38.19		.....	99.25	76.67	.....	60.32	37.01
26		98.25	99.25	77.80	59.85	60.32	38.14		98.75	99.00	76.65	60.35	60.07	36.99
27		.....	99.25	77.60	.....	60.32	37.94		98.85	99.40	76.65	60.45	60.47	36.99
28		98.25	99.25	77.80	59.85	60.32	38.14		.....	99.00	76.65	.....	60.07	36.99
29		.....	99.30	77.85	.....	60.37	38.19		.....	99.10	76.67	.....	60.17	37.01
30	1	98.35	99.35	77.80	59.95	60.42	38.14		98.53	99.08	76.67	60.13	60.15	37.01
31		.....	.....	.....	.....	.....	.....		.....	99.15	76.65	.....	60.22	36.99

Date	NOVEMBER 1915							DECEMBER					
1	.....	98.92	76.60	.....	1059.99	1036.94	98.58		99.10	76.65	1060.18	1060.17	1036.99
2	98.55	99.00	76.60	1060.15	60.07	36.94	98.57		99.10	76.63	60.17	60.17	36.97
3	.....	99.10	76.60	.....	60.17	36.94	.....		99.10	76.63	.....	60.17	36.97
4	98.50	99.00	76.60	60.10	60.07	36.94	98.57		99.10	76.62	60.17	60.17	36.96
5	98.65	99.35	76.63	60.25	60.42	36.97	.....		99.10	76.60	.....	60.17	37.04
6	98.50	99.00	76.65	60.10	60.07	36.99	98.58	5	99.10	76.22	60.18	60.17	36.56
7	.....	98.85	76.65	.....	59.92	36.99	.....		99.10	76.50	.....	60.17	36.84
8	98.45	98.80	76.65	60.05	59.87	36.99	98.58		99.10	76.50	60.18	60.17	36.84
9	.....	99.15	76.70	.....	60.22	37.04	98.58		99.10	76.46	60.18	60.17	36.80
10	3 98.80	99.40	76.65	60.40	60.47	36.99	.....		99.10	76.54	.....	60.17	36.88
11	.....	99.10	76.65	.....	60.17	36.99	98.62		99.12	76.50	60.22	60.19	36.84
12	98.75	99.30	76.65	60.35	60.37	36.99	.....		99.10	76.58	.....	60.17	36.92
13	98.63	99.15	76.65	60.23	60.22	36.99	98.60		99.10	76.57	60.20	60.17	36.91
14	.....	99.05	76.65	.....	60.12	36.99	98.58		99.10	76.60	60.18	60.17	36.94
15	98.58	99.10	76.65	60.18	60.17	36.99	98.58		99.10	76.60	60.18	60.17	36.94
16	98.63	99.15	76.65	60.23	60.22	36.99	98.63		99.13	76.62	60.23	60.20	36.96
17	.....	99.25	76.70	.....	60.32	37.04	.....		99.15	76.65	.....	60.22	36.99
18	98.65	99.20	76.67	60.25	60.27	37.01	98.63		99.15	76.68	60.23	60.22	37.02
19	.....	98.85	76.65	.....	59.92	36.99	.....		99.15	76.65	.....	60.22	36.99
20	98.55	99.05	76.65	60.15	60.12	36.99	98.63		99.15	76.60	60.23	60.22	36.94
21	.....	99.05	76.65	.....	60.12	36.99	98.63		99.15	76.65	60.23	60.22	36.99
22	98.56	99.10	76.62	60.16	60.17	36.96	.....		99.15	76.68	.....	60.22	37.02
23	98.60	99.10	76.65	60.20	60.17	36.99	98.63		99.15	76.65	60.23	60.22	36.99
24	.....	99.10	76.65	.....	60.17	36.99	98.65		99.17	76.65	60.25	60.24	36.99
25	98.55	99.00	76.65	60.15	60.07	36.99	.....		99.18	76.60	.....	60.25	36.94
26	.....	99.10	76.65	.....	60.17	36.99	98.63		99.20	76.12	60.23	60.27	36.46
27	98.55	99.10	76.65	60.15	60.17	36.99	.....		99.20	76.40	.....	60.27	36.74
28	98.60	99.18	76.62	60.20	60.25	36.96	98.63		99.17	76.55	60.23	60.24	36.89
29	4	99.05	76.50	.....	60.12	36.84	98.63		99.17	76.60	60.23	60.24	36.94
30	98.58	99.10	76.63	60.18	60.17	36.97	.....		99.20	76.65	.....	60.27	36.99
31	.....	.....	.....	.....	.....	.....	98.63		99.20	76.67	60.23	60.27	37.01

1. 12 logs put in September 30th. (S.) 2. Oct. 6th, Heavy north wind with rain and snow. (S.) 3. Nov. 10-12, High west wind. (S.) 4. Night of 29th, lake froze over. (S.) 5. Drop in lower gauge on the 6th is accounted for by Mills being shut down on Sunday December 5. (S.)

TABLE 8—Continued

WATER LEVELS—LAKE OF THE WOODS—WARROAD, MINN.

RECORDS OF U. S. WAR DEPARTMENT

1915	JANUARY					FEBRUARY					MARCH				
	Footnote	Gauge Height			Elevation Sea-level Datum	Footnote	Gauge Heigh			Elevation Sea-level Datum	Footnote	Gauge Height			Elevation Sea-level Datum
		8 a.m.	6 p.m.	Mean			8 a.m.	6 p.m.	Mean			8 a.m.	6 p.m.	Mean	
1		7.22			1060.80		7.30			1060.88		7.25			1060.83
2		7.30			60.88		7.30			60.88		7.26			60.84
3		7.25			60.83		7.30			60.88		7.26			60.84
4		7.28			60.86		7.29			60.87		7.26			60.84
5		7.22			60.80		7.30			60.88		7.29			60.87
6		7.25			60.83		7.29			60.87		7.28			60.86
7		7.27			60.85		7.28			60.86		7.25			60.83
8		7.23			60.81		7.27			60.85		7.26			60.84
9		7.30			60.88		7.31			60.89		7.21			60.79
10		7.27			60.85		7.28			60.86		7.20			60.78
11		7.28			60.86		7.28			60.86		7.22			60.80
12		7.31			60.89		7.30			60.88		7.20			60.78
13		7.23			60.81		7.30			60.88		7.20			60.78
14		7.26			60.84		7.26			60.84		7.20			60.78
15		7.28			60.86		7.27			60.85		7.20			60.78
16		7.28			60.86		7.31			60.89		7.20			60.78
17		7.22			60.80		7.34			60.92		7.20			60.78
18		7.30			60.88		7.31			60.89		7.21			60.79
19		7.25			60.83		7.31			60.89		7.21			60.79
20		7.29			60.87		7.31			60.89		7.21			60.79
21		7.30			60.88		7.31			60.89		7.21			60.79
22		7.31			60.89		7.33			60.91		7.21			60.79
23		7.28			60.86		7.31			60.89		7.20			60.78
24		7.30			60.88		7.28			60.86		7.20			60.78
25		7.28			60.86		7.31			60.89		7.20			60.78
26		7.27			60.85		7.31			60.89		7.18			60.76
27		7.27			60.85		7.29			60.87		7.18			60.76
28		7.30			60.88		7.26			60.84		7.16			60.74
29		7.30			60.88							7.20			60.78
30		7.31			60.89							7.15			60.73
31		7.25			60.83							7.16			60.74

1915	APRIL				MAY					JUNE				
										7 a.m.				
1		7.17		1060.75		7.50	7.55	7.52	1061.10	7.62	7.66	7.64	1061.22
2		7.20		60.78	1	7.55	6.00	6.77	60.35	7.58	7.60	7.59	61.17
3		7.15		60.73	2	7.80	7.50	7.65	61.23	7.55	7.60	7.57	61.15
4		7.25		60.83		7.40	7.40	7.40	60.98	7.60	7.50	7.55	61.13
5		7.25		60.83		7.38	7.44	7.41	60.99	7.38	7.41	7.39	60.97
6		7.25		60.83		7.51	7.40	7.45	61.03	7.41	7.40	7.40	60.98
7		7.27		60.85		7.42	7.60	7.51	61.09	7.55	7.58	7.56	61.14
8		7.30		60.88		7.60	7.50	7.55	61.13	8.30	7.50	7.90	61.48
9		7.28		60.86		7.40	7.40	7.40	60.98	7.50	7.46	7.48	61.06
10		7.21		60.79		7.50	7.50	7.50	61.08	7.60	7.60	7.60	61.18
11		7.25		60.83		7.50	7.40	7.45	61.03	7.51	7.57	7.54	61.12
12		7.30		60.88		7.45	7.60	7.52	61.10	7.53	8.00	7.76	61.34
13		7.30		60.88		7.62	7.60	7.61	61.19	7.60	7.50	7.55	61.13
14		7.28		60.86		7.60	7.70	7.65	61.23	7.20	7.60	7.40	60.98
15		7.30		60.88	3	8.60	8.20	8.40	61.98	7.50	7.55	7.52	61.10
16		7.28		60.86		7.80	7.70	7.75	61.33	7.72	7.73	7.72	61.30
17		7.29		60.87		8.10	7.80	7.95	61.53	7.60	7.80	7.70	61.28
18		7.30		60.88		7.80	7.70	7.75	61.33	7.80	7.80	7.80	61.38
19		7.30		60.88		7.75	7.70	7.72	61.30	7.79	7.70	7.74	61.32
20		7.30		60.88		7.70	7.70	7.70	61.28	7.70	7.60	7.65	61.23
21		7.30		60.88		8.00	7.60	7.80	61.38	7.51	7.60	7.55	61.13
22		7.30		60.88		7.60	7.52	7.56	61.14	7.90	7.84	7.87	61.45
23		7.32		60.90		7.62	7.65	7.63	61.21	7.57	7.91	7.74	61.32
24		5.34		60.92		7.70	7.70	7.70	61.28	7.81	7.82	7.81	61.39
25		7.38		60.96	4	7.90	7.80	7.85	61.43	8.10	8.20	8.15	61.73
26		7.40		60.98		7.65	7.70	7.67	61.25	8.00	7.91	7.95	61.53
27		7.40		60.98		7.55	7.65	7.60	61.18	8.04	8.05	8.04	61.62
28		7.20		60.78		7.65	7.65	7.65	61.23	8.04	8.10	8.07	61.65
29		7.40		60.98		7.60	7.70	7.65	61.23	8.10	8.11	8.10	61.68
30		7.50		61.08		7.60	7.67	7.63	61.21	8.12	8.22	8.17	61.75
31						7.60	7.65	7.62	61.20				

1. Very strong NE. wind. 2. Very strong NE. wind. 3. Very strong E. wind. .50 rain. Gale from East. 4. Strong E. wind. 5. Very strong NE. wind. 1.00 rain. 6. Very strong NE. wind. .75 rain. 7. Very strong SW. wind. Shower.

TABLE 8—Continued

WATER LEVELS—LAKE OF THE WOODS—WARROAD, MINN.

RECORDS OF U. S. WAR DEPARTMENT

1915	July					August					September				
	Footnote	Gauge Height			Elevation Sea-level Datum	Footnote	Gauge Height			Elevation Sea-level Datum	Footnote	Gauge Height			Elevation Sea-level Datum
		8 a.m.	6 p.m.	Mean			8 a.m.	6 p.m.	Mean			8 a.m.	6 p.m.	Mean	
1	...	8.10	8.12	8.11	1061.69	4	8.20	8.20	8.20	1061.78	...	7.05	7.20	7.13	1060.71
2	...	8.12	8.28	8.20	61.78	...	8.20	8.02	8.11	61.69	...	7.15	7.00	7.07	60.65
3	...	8.27	8.32	8.29	61.87	...	7.85	7.86	7.85	61.43	...	6.95	7.08	7.02	60.60
4	1	8.45	8.53	8.49	62.07	...	7.87	7.79	7.83	61.41	...	7.05	7.05	7.05	60.63
5	...	8.32	8.29	8.31	61.89	...	7.75	7.74	7.75	61.33	...	6.92	7.00	6.96	60.54
6	...	8.30	8.32	8.31	61.89	...	7.69	7.65	7.67	61.25	...	7.05	7.05	7.05	60.63
7	...	8.32	8.32	8.32	61.90	...	7.70	7.70	7.70	61.28	...	7.00	7.00	7.00	60.58
8	...	8.25	8.25	8.25	61.83	...	7.70	7.70	7.70	61.28	...	6.65	6.80	6.73	60.31
9	...	8.33	8.30	8.31	61.89	...	7.65	7.65	7.65	61.23	...	6.88	6.90	6.89	60.47
10	...	8.23	8.30	8.27	61.85	...	7.65	7.60	7.62	61.20	...	6.75	6.90	6.82	60.40
11	...	8.25	8.26	8.25	61.83	...	7.52	7.51	7.52	61.10	7	6.90	6.90	6.90	60.48
12	...	8.29	8.12	8.21	61.79	...	7.45	7.48	7.46	61.04	...	6.85	6.80	6.83	60.41
13	...	8.22	8.25	8.23	61.81	...	7.38	7.55	7.47	61.05	...	6.90	6.90	6.90	60.48
14	2	8.52	8.49	8.51	62.09	...	7.50	7.53	7.51	61.09	...	6.90	6.70	6.80	60.38
15	...	8.40	8.22	8.31	61.89	...	7.50	7.48	7.49	61.07	...	6.70	6.49	6.59	60.17
16	3	8.02	7.92	7.97	61.55	5	7.82	7.80	7.81	61.39	...	6.70	6.80	6.75	60.33
17	...	8.25	8.24	8.24	61.82	...	7.40	7.35	7.38	60.96	...	6.70	6.71	6.71	60.29
18	...	8.38	8.35	8.37	61.95	...	7.25	7.42	7.33	60.91	...	6.90	6.80	6.85	60.43
19	...	8.30	8.22	8.26	61.84	...	7.23	7.38	7.31	60.89	...	6.74	6.80	6.77	60.35
20	...	8.19	8.31	8.25	61.83	...	7.25	7.30	7.27	60.85	8	7.90	6.90	7.40	60.98
21	...	8.29	8.16	8.22	61.80	...	7.25	7.30	7.28	60.86	...	6.80	6.64	6.72	60.30
22	...	8.02	7.82	7.92	61.50	...	7.25	7.30	7.27	60.85	...	6.60	6.60	6.60	60.18
23	...	8.25	8.29	8.27	61.85	...	7.00	7.20	7.10	60.68	...	6.76	6.96	6.86	60.44
24	...	8.15	8.20	8.18	61.76	...	7.24	7.10	7.17	60.75	...	6.90	6.80	6.85	60.43
25	...	8.10	8.10	8.10	61.68	...	7.20	7.15	7.18	60.76	...	6.84	7.00	6.92	60.50
26	...	8.10	8.05	8.07	61.65	...	7.00	7.00	7.00	60.58	...	7.10	6.97	7.03	60.61
27	...	8.15	8.05	8.10	61.68	...	6.93	6.92	6.92	60.50	...	6.80	6.70	6.75	60.33
28	...	7.95	7.94	7.95	61.53	...	6.90	7.30	7.10	60.68	...	6.60	6.70	6.65	60.23
29	...	7.82	8.02	7.92	61.50	...	7.25	7.00	7.23	60.81	...	6.67	6.70	6.69	60.27
30	...	7.98	8.00	7.99	61.57	6	7.65	7.10	7.37	60.95	...	6.68	6.70	6.69	60.27
31	...	8.05	8.00	8.02	61.60	...	7.05	7.00	7.03	60.61	...	.....	.....	.....	.....

1915	October					November					December				
							5 p.m.								
1	9	6.70	6.77	6.73	1060.31	...	6.60	6.48	6.54	1060.12	...	6.65	.....	.....	1060.23
2	...	6.60	6.70	6.65	60.23	...	6.76	6.63	6.69	60.27	...	6.70	.....	.....	60.28
3	...	6.84	7.00	6.92	60.50	...	6.62	6.70	6.66	60.24	...	6.70	.....	.....	60.28
4	...	7.20	6.90	7.05	60.63	...	6.60	6.60	6.60	60.18	...	6.70	.....	.....	60.28
5	...	6.58	6.60	6.59	60.17	...	6.46	6.50	6.48	60.06	...	6.70	.....	.....	60.28
6	...	6.80	7.50	7.15	60.73	...	6.60	6.65	6.63	60.21	...	6.75	.....	.....	60.33
7	10	7.50	7.45	7.47	61.05	...	6.88	6.95	6.91	60.49	...	6.60	.....	.....	60.18
8	...	7.00	7.45	7.23	60.81	...	6.20	6.60	6.40	59.98	...	6.70	.....	.....	60.28
9	...	6.70	7.60	7.15	60.73	...	6.75	6.84	6.80	60.38	...	6.75	.....	.....	60.33
10	...	6.70	6.70	6.70	60.28	...	6.70	6.80	6.75	60.33	...	6.70	.....	.....	60.28
11	...	6.86	6.80	6.83	60.41	12	6.50	5.90	6.20	59.78	...	6.70	.....	.....	60.28
12	...	6.65	6.70	6.67	60.25	13	5.90	6.10	6.00	59.58	...	6.70	.....	.....	60.28
13	...	6.80	6.70	6.75	60.33	...	6.50	6.50	6.50	60.08	...	6.70	.....	.....	60.28
14	...	6.80	6.75	6.77	60.35	...	6.70	6.65	6.68	60.26	...	6.70	.....	.....	60.28
15	...	6.66	6.75	6.70	60.28	...	6.75	6.70	6.72	60.30	...	6.74	.....	.....	60.32
16	...	6.76	6.80	6.78	60.36	...	6.75	6.73	6.74	60.32	...	6.75	.....	.....	60.33
17	...	6.80	6.78	6.79	60.37	...	6.80	6.60	6.70	60.28	...	6.70	.....	.....	60.28
18	...	6.70	6.70	6.70	60.28	...	6.62	6.70	6.66	60.24	...	6.73	.....	.....	60.31
19	...	6.60	6.68	6.64	60.22	...	6.80	6.75	6.78	60.36	...	6.70	.....	.....	60.28
20	...	6.60	6.60	6.60	60.18	...	6.70	6.68	6.69	60.27	...	6.77	.....	.....	60.35
21	...	6.60	6.70	6.65	60.23	...	6.60	6.70	6.65	60.23	...	6.75	.....	.....	60.33
22	...	6.90	6.90	6.90	60.48	...	6.70	6.73	6.71	60.29	...	6.78	.....	.....	60.36
23	...	7.10	6.95	7.03	60.61	...	6.70	6.63	6.67	60.25	...	6.71	.....	.....	60.29
24	...	6.88	6.80	6.84	60.42	...	6.70	6.70	6.70	60.28	...	6.78	.....	.....	60.36
25	11	5.95	6.00	5.97	59.55	...	6.70	6.73	6.71	60.29	...	6.74	.....	.....	60.32
26	...	6.60	6.60	6.60	60.18	14	6.70	6.80	6.75	60.33	...	6.77	.....	.....	60.35
27	...	6.54	6.60	6.57	60.15	...	6.70	6.80	6.75	60.33	...	6.74	.....	.....	60.32
28	...	6.55	6.75	6.65	60.23	...	6.65	6.61	6.63	60.21	...	6.74	.....	.....	60.32
29	...	6.50	6.55	6.53	60.11	...	6.60	6.63	6.61	60.19	...	6.80	.....	.....	60.38
30	...	6.70	7.10	6.90	60.48	...	6.68	6.64	6.66	60.24	...	6.78	.....	.....	60.36
31	...	6.56	6.50	6.53	60.11	...	.....	.....	.....	.....	...	6.75	.....	.....	60.33

1. Light N. wind. 2. Very strong E. wind. 3. Very strong W. wind. 4. Very strong E. wind. 5. Very strong E. wind. 6. Very strong NW. wind. 7. NW. light, clear. Reading taken at Zippel Bay at 6 p. m. 8. N. gale, clear. Gale all night and day. 9. Readings from 1st to 9th, inclusive, taken at Zippel Bay. 10. N. gale, snow all day. 11. W. very strong. Snowing most of day. 12. NW. gale, cloudy light snow at night. 13. W. gale, cloudy, flurries of snow all day. 14. E. light, cloudy. Lake frozen over

TABLE 10—Continued

WATER LEVELS—LAKE OF THE WOODS—KENORA, ONTARIO

RECORDS OF KENORA MUNICIPAL POWER PLANT

1915	JANUARY				FEBRUARY			
	W. P. S. Datum		Sea-level Datum		W. P. S. Datum		Sea-level Datum	
	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race
1	1059.44	1035.79	1060.75	1037.10	1059.38	1036.39	1060.69	1037.70
2	59.44	35.95	60.75	37.26	59.43	36.43	60.74	37.74
3	59.49	35.69	60.80	37.00	59.42	36.39	60.73	37.70
4	59.48	35.98	60.79	37.29	59.43	36.40	60.74	37.71
5	59.48	35.89	60.79	37.20	59.41	36.43	60.72	37.74
6	59.40	36.32	60.71	37.63	59.45	36.43	60.76	37.74
7	59.41	36.33	60.72	37.64	59.47	35.71	60.78	37.02
8	59.43	36.32	60.74	37.63	59.43	36.35	60.74	37.66
9	59.42	36.34	60.73	37.65	59.43	36.40	60.74	37.71
10	59.47	35.72	60.78	37.03	59.44	36.39	60.75	37.70
11	59.46	36.28	60.77	37.59	59.40	36.38	60.71	37.69
12	59.46	36.33	60.77	37.64	59.41	36.38	60.72	37.69
13	59.47	36.34	60.78	37.65	59.44	36.39	60.75	37.70
14	59.45	36.39	60.76	37.70	59.50	35.72	60.81	37.03
15	59.41	36.40	60.72	37.71	59.47	36.27	60.78	37.58
16	59.40	36.39	60.71	37.70	59.46	36.34	60.77	37.65
17	59.48	35.75	60.79	37.06	59.42	36.34	60.73	37.65
18	59.47	35.99	60.78	37.50	59.46	36.38	60.77	37.69
19	59.43	36.40	60.74	37.71	59.43	36.43	60.74	37.74
20	59.42	36.49	60.73	37.80	59.47	36.35	60.78	37.66
21	59.45	36.44	60.76	37.75	59.49	35.70	60.80	37.01
22	59.43	36.48	60.74	37.79	59.44	35.81	60.75	37.12
23	59.45	36.43	60.76	37.74	59.41	36.34	60.72	37.65
24	59.47	35.80	60.78	37.11	59.40	36.34	60.71	37.65
25	59.43	36.44	60.74	37.75	59.37	36.36	60.68	37.67
26	59.44	36.46	60.75	37.77	59.39	36.40	60.70	37.71
27	59.42	36.52	60.73	37.83	59.37	36.41	60.68	37.72
28	59.42	36.49	60.73	37.80	59.45	35.64	60.76	36.95
29	59.42	36.46	60.73	37.77				
30	59.42	36.49	60.73	37.80				
31	59.47	35.71	60.78	37.02				

1915	MARCH				APRIL			
1	1059.46	1035.75	1060.77	1037.06	1059.37	1035.64	1060.68	1036.95
2	59.40	36.34	60.71	37.65	59.38	35.48	60.69	36.79
3	59.38	36.35	60.69	37.66	59.36	36.39	60.67	37.70
4	59.39	36.34	60.70	37.65	59.43	35.34	60.74	36.65
5	59.36	36.35	60.67	37.66	59.38	36.28	60.69	37.59
6	59.37	36.33	60.68	37.64	59.42	36.33	60.73	37.64
7	59.39	35.61	60.70	36.92	59.41	36.27	60.72	37.58
8	59.40	36.27	60.71	37.58	59.41	36.29	60.72	37.60
9	59.37	36.35	60.68	37.66	59.41	36.49	60.72	37.80
10	59.37	36.35	60.68	37.66	59.43	36.98	60.74	38.29
11	59.37	36.29	60.68	37.60	59.47	36.65	60.78	37.96
12	59.37	36.31	60.68	37.62	59.45	36.87	60.76	38.18
13	59.36	36.28	60.67	37.59	59.43	37.38	60.74	38.69
14	59.40	35.37	60.71	36.68	59.41	37.47	60.72	38.78
15	59.39	35.39	60.70	36.70	59.39	37.62	60.70	38.93
16	59.41	35.34	60.72	36.65	59.39	37.68	60.70	38.99
17	59.42	35.35	60.73	36.66	59.43	37.72	60.74	39.03
18	59.33	35.38	60.64	36.69	59.44	37.41	60.75	38.72
19	59.43	35.40	60.74	36.71	59.41	37.63	60.72	38.94
20	59.40	35.43	60.71	36.74	59.37	37.82	60.68	39.13
21	59.39	35.40	60.70	36.71	59.42	37.87	60.73	39.18
22	59.40	35.37	60.71	36.68	59.37	37.94	60.68	39.25
23	59.43	35.50	60.74	36.81	59.39	37.99	60.70	39.30
24	59.38	35.50	60.69	36.81	59.39	37.87	60.70	39.18
25	59.37	36.24	60.68	37.55	59.49	37.74	60.80	39.05
26	59.42	36.28	60.73	37.59	59.38	37.92	60.69	39.23
27	59.37	36.23	60.68	37.54	59.50	38.08	60.81	39.39
28	59.41	35.49	60.72	36.80	59.51	38.21	60.82	39.52
29	59.38	35.70	60.69	37.01	59.48	38.18	60.79	39.49
30	59.38	35.60	60.69	36.91	59.42	38.18	60.73	39.49
31	59.34	36.33	60.65	37.64				

TABLE 10—Continued

WATER LEVELS—LAKE OF THE WOODS—KENORA, ONTARIO

RECORDS OF KENORA MUNICIPAL POWER PLANT

1915	MAY				JUNE			
	W. P. S. Datum		Sea-level Datum		W. P. S. Datum		Sea-level Datum	
	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race
1	1059.42	1038.17	1060.73	1039.48	1059.72	1039.22	1061.03	1040.53
2	59.52	37.73	60.83	39.04	59.64	39.21	60.95	40.52
3	59.43	37.64	60.74	38.95	59.57	39.20	60.88	40.51
4	59.51	38.06	60.82	39.37	59.65	39.19	60.96	40.50
5	59.53	38.07	60.84	39.38	59.85	39.26	61.16	40.57
6	59.40	38.09	60.71	39.40	59.50	38.94	60.81	40.25
7	59.56	38.24	60.87	39.55	59.53	38.86	60.84	40.17
8	59.15	38.22	60.46	39.53	59.34	39.14	60.65	40.45
9	59.73	37.89	61.04	39.20	59.59	39.19	60.90	40.50
10	59.62	37.75	60.93	39.06	59.67	39.22	60.98	40.53
11	59.72	37.84	61.03	39.15	59.55	39.27	60.86	40.58
12	59.65	38.16	60.96	39.47	59.60	39.26	60.91	40.57
13	59.73	38.04	61.04	39.35	59.47	39.01	60.78	40.32
14	59.69	38.27	61.00	39.58	59.90	38.90	61.21	40.21
15	59.60	38.27	60.91	39.58	59.73	39.00	61.04	40.31
16	59.56	37.89	60.86	39.20	59.45	39.05	60.76	40.36
17	59.56	38.02	60.86	39.33	59.85	39.03	61.16	40.34
18	59.67	38.44	60.98	39.75	59.69	39.26	61.00	40.57
19	59.73	38.96	61.04	40.27	59.75	39.32	61.06	40.63
20	59.70	39.46	61.01	40.77	59.92	39.04	61.23	40.35
21	59.65	39.90	60.96	41.21	60.04	39.14	61.35	40.45
22	59.75	39.90	61.06	41.21	59.80	39.24	61.11	40.35
23	59.83	39.30	61.14	40.61	60.14	39.46	61.45	40.77
24	59.74	39.27	61.05	40.58	59.94	39.46	61.25	40.77
25	59.54	39.32	60.85	40.63	60.12	39.38	61.43	40.69
26	59.73	39.33	61.04	40.64	60.05	39.35	61.36	40.66
27	59.83	39.34	61.14	40.65	60.20	39.26	61.51	40.57
28	59.73	39.33	61.04	40.64	60.32	39.34	61.63	40.65
29	59.68	39.31	60.99	40.62	60.21	39.66	61.52	40.97
30	59.72	39.06	61.03	40.37	60.30	40.02	61.61	41.33
31	59.71	39.02	61.02	40.33				

1915	JULY				AUGUST			
1	1060.43	1040.09	1061.74	1041.40	1059.92	1040.78	1061.23	1042.09
2	60.35	40.31	61.66	41.62	59.85	40.78	61.16	42.09
3	60.32	40.43	61.63	41.74	59.88	40.87	61.19	42.18
4	60.28	40.28	61.59	41.59	59.82	40.72	61.13	42.03
5	60.30	40.26	61.61	41.57	59.81	40.70	61.12	42.01
6	60.35	40.50	61.66	41.81	59.81	40.70	61.12	42.01
7	60.34	40.52	61.65	41.83	59.75	40.68	61.06	41.99
8	60.37	40.65	61.68	41.96	59.75	40.68	61.06	41.99
9	60.42	40.70	61.73	42.01	59.79	40.69	61.10	42.00
10	60.48	40.79	61.79	42.10	59.77	40.44	61.08	41.75
11	60.52	40.62	61.83	41.93	59.82	40.32	61.13	41.63
12	60.45	40.56	61.76	41.87	59.73	40.28	61.04	41.59
13	60.47	40.66	61.78	41.97	59.72	40.23	61.03	41.54
14	60.26	40.63	61.57	41.94	59.62	40.23	60.93	41.54
15	60.41	40.61	61.72	41.92	59.62	40.23	60.93	41.54
16	60.41	40.64	61.72	41.95	59.43	40.06	60.74	41.37
17	60.14	40.72	61.45	42.03	59.62	40.08	60.93	41.39
18	60.28	40.51	61.59	41.82	59.55	40.10	60.86	41.41
19	60.22	40.59	61.53	41.90	59.55	40.08	60.86	41.39
20	60.21	40.66	61.52	41.97	59.62	40.06	60.93	41.37
21	60.27	40.54	61.58	41.85	59.42	39.54	60.73	40.85
22	60.32	40.52	61.63	41.83	59.47	38.74	60.78	40.05
23	60.05	40.66	61.36	41.97	59.52	38.30	60.83	39.61
24	60.26	40.48	61.57	41.79	59.23	38.00	60.54	39.31
25	60.24	40.57	61.55	41.88	59.14	37.84	60.45	39.15
26	60.15	40.69	61.46	42.00	59.40	37.28	60.71	38.59
27	60.13	40.73	61.44	42.04	59.55	37.08	60.86	38.39
28	60.09	40.95	61.40	42.26	59.39	36.94	60.70	38.25
29	60.13	40.98	61.44	42.29	59.27	36.64	60.58	37.95
30	60.08	40.91	61.39	42.22	59.43	36.59	60.74	37.90
31	59.93	40.98	61.24	42.29	59.38	36.54	60.69	37.85

TABLE 10—Continued

WATER LEVELS—LAKE OF THE WOODS—KENORA, ONTARIO

RECORDS OF KENORA MUNICIPAL POWER PLANT

1915	SEPTEMBER				OCTOBER			
	W. P. S. Datum		Sea-level Datum		W. P. S. Datum		Sea-level Datum	
	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race	Fore Bay	Tail Race
1	1059.28	1036.53	1060.59	1037.84	1058.98	1036.69	1060.29	1038.00
2	59.27	36.58	60.58	37.89	59.11	36.57	60.42	37.88
3	59.35	36.59	60.66	37.90	58.93	35.71	60.24	37.02
4	59.28	36.54	60.59	37.85	58.58	36.40	59.89	37.71
5	59.37	36.38	60.68	37.69	59.03	36.44	60.34	37.75
6	59.27	38.31	60.58	37.62	58.83	36.54	60.14	37.85
7	59.27	36.41	60.58	37.72	58.48	36.56	59.79	37.87
8	59.32	36.51	60.63	37.82	58.62	36.51	59.93	37.82
9	59.23	36.54	60.54	37.85	59.15	36.53	60.46	37.84
10	59.11	36.59	60.42	37.90	59.00	35.59	60.31	36.90
11	59.10	36.55	60.41	37.86	58.85	36.41	60.16	37.72
12	59.12	36.33	60.43	37.64	59.01	36.51	60.32	37.82
13	58.98	36.76	60.29	38.07	58.90	36.52	60.21	37.83
14	58.96	36.86	60.27	38.17	58.92	36.48	60.23	37.79
15	59.21	36.92	60.52	38.23	58.98	36.47	60.29	37.78
16	59.17	36.98	60.48	38.29	58.90	36.46	60.21	37.77
17	59.08	36.94	60.39	38.25	58.95	35.67	60.26	36.98
18	58.88	36.94	60.19	38.25	58.91	36.40	60.22	37.71
19	59.13	36.31	60.44	37.62	59.08	35.74	60.39	37.05
20	58.46	36.85	59.77	38.16	58.88	35.69	60.19	37.00
21	58.95	36.88	60.26	38.19	58.82	36.44	60.13	37.75
22	59.07	36.89	60.38	38.20	58.80	36.46	60.11	37.77
23	58.93	36.91	60.24	38.22	58.75	36.46	60.06	37.77
24	58.79	36.85	60.10	38.16	58.89	36.39	60.20	37.70
25	58.91	36.92	60.22	38.23	59.07	36.49	60.38	37.80
26	58.74	36.31	60.05	37.62	58.64	36.54	59.95	37.85
27	58.95	36.76	60.26	38.07	59.03	36.47	60.34	37.78
28	59.02	36.89	60.33	38.20	58.68	36.49	59.99	37.80
29	58.98	36.92	60.29	38.23	58.78	36.46	60.09	37.77
30	59.00	36.96	60.31	38.27	58.80	36.46	60.11	37.77
31					58.91	35.75	60.22	37.06

1915	NOVEMBER				DECEMBER			
1	1058.68	1036.54	1059.99	1037.85	1058.80	1036.66	1060.11	1037.97
2	58.68	36.49	59.99	37.80	58.80	36.64	60.11	37.95
3	58.78	36.51	60.09	37.82	58.77	36.65	60.08	37.96
4	58.64	36.52	59.95	37.83	58.78	36.59	60.09	37.90
5	58.98	36.53	60.29	37.84	58.85	35.74	60.16	37.05
6	58.74	36.58	60.05	37.89	58.78	36.46	60.09	37.77
7	58.68	35.66	59.99	36.97	58.83	36.58	60.14	37.89
8	58.74	36.49	60.05	37.80	58.87	35.76	60.18	37.07
9	58.79	36.60	60.10	37.91	58.84	35.74	60.15	37.05
10	59.18	35.84	60.49	37.15	58.80	36.61	60.11	37.92
11	58.76	36.62	60.07	37.93	58.84	36.66	60.15	37.97
12	59.10	35.92	60.41	37.23	58.89	35.83	60.20	37.14
13	58.80	36.56	60.11	37.87	58.84	36.63	60.15	37.94
14	58.81	35.81	60.12	37.12	58.81	36.70	60.12	38.01
15	58.80	36.56	60.11	37.87	58.82	36.66	60.13	37.97
16	58.84	36.61	60.15	37.92	58.84	36.69	60.15	38.00
17	58.97	36.59	60.28	37.90	58.84	36.69	60.15	38.00
18	58.93	36.60	60.24	37.91	58.85	36.65	60.16	37.96
19	58.61	36.58	59.92	37.89	58.92	35.92	60.23	37.23
20	58.79	36.62	60.10	37.93	58.86	36.58	60.17	37.89
21	58.67	35.92	59.98	37.23	58.87	36.66	60.18	37.97
22	58.87	36.60	60.18	37.91	58.85	36.66	60.16	37.97
23	58.83	36.59	60.14	37.90	58.82	36.66	60.13	37.97
24	58.81	36.57	60.12	37.88	58.82	35.96	60.13	37.27
25	58.67	36.60	59.98	37.91	58.94	35.73	60.25	37.04
26	58.80	36.63	60.11	37.94	58.94	35.54	60.25	36.85
27	58.78	36.66	60.09	37.97	58.89	36.53	60.20	37.84
28	58.90	35.71	60.21	37.02	58.84	36.66	60.15	37.97
29	58.77	36.50	60.08	37.81	58.83	36.61	60.14	37.92
30	58.80	36.60	60.11	37.91	58.92	36.68	60.23	37.99
31					58.87	36.63	60.18	37.94

TABLE 14—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN AND KEEWATIN, ONTARIO

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

JANUARY

1915	Local Datum	W. P. S. Datum			Sea-level Datum			
	Lake	Above Dam	Tail Water	River Bridge	Lake	Above Dam	Tail Water	River Bridge
1	99.72	1059.10	1035.65	1035.48	1060.79	1060.41	1036.96	1036.79
2	99.69	59.06	35.70	35.48	60.76	60.37	37.01	36.79
3	99.74	59.05	35.62	35.52	60.81	60.36	36.93	36.83
4	99.74	59.01	35.57	35.49	60.81	60.32	36.88	36.80
5	99.68	59.00	35.68	35.61	60.75	60.31	36.99	36.92
6	99.69	59.00	35.70	35.66	60.76	60.31	37.01	36.97
7	99.67	59.03	35.80	35.71	60.74	60.34	37.11	37.02
8	99.67	59.11	35.89	35.75	60.74	60.42	37.20	37.06
9	99.67	59.09	35.90	35.76	60.74	60.40	37.21	37.07
10	99.75	59.10	35.72	35.62	60.82	60.41	37.03	36.93
11	99.71	59.11	35.65	35.53	60.78	60.42	36.96	36.84
12	99.68	59.11	35.80	35.70	60.75	60.42	37.11	37.01
13	99.71	59.13	35.86	35.75	60.78	60.44	37.17	37.06
14	99.66	59.05	35.90	35.79	60.73	60.36	37.21	37.10
15	99.62	59.10	35.90	35.79	60.69	60.41	37.21	37.10
16	99.61	59.10	35.90	35.80	60.68	60.41	37.21	37.11
17	99.70	59.10	35.68	35.62	60.77	60.41	36.99	36.93
18	99.75	59.10	35.70	35.56	60.82	60.41	37.01	36.87
19	99.67	59.10	36.00	35.76	60.74	60.41	37.31	37.07
20	99.68	59.10	35.90	35.81	60.75	60.41	37.21	37.12
21	99.71	59.05	35.95	35.84	60.78	60.36	37.26	37.15
22	99.69	59.02	36.00	35.83	60.76	60.33	37.31	37.14
23	99.71	59.02	35.95	35.83	60.78	60.33	37.26	37.14
24	99.75	59.00	35.71	35.66	60.82	60.31	37.02	36.97
25	99.75	59.06	35.71	35.62	60.82	60.37	37.02	36.93
26	99.68	59.10	35.90	35.82	60.75	60.41	37.21	37.13
27	99.70	59.15	36.05	35.84	60.77	60.46	37.36	37.15
28	99.65	59.10	36.00	35.86	60.72	60.41	37.31	37.17
29	99.67	59.10	36.00	35.87	60.74	60.41	37.31	37.18
30	99.67	59.10	36.00	35.86	60.74	60.41	37.31	37.17
31	.....	59.09	35.67	35.67	.....	60.40	36.98	36.98

FEBRUARY

1	99.65	1059.08	1035.76	1035.61	1060.72	1060.49	1037.07	1036.92
2	99.67	59.10	35.90	35.78	60.74	60.41	37.21	37.09
3	99.67	59.07	35.90	35.82	60.74	60.38	37.21	37.13
4	99.66	59.10	35.90	35.82	60.73	60.41	37.21	37.13
5	99.68	59.12	35.95	35.84	60.75	60.43	37.26	37.15
6	99.69	59.15	36.00	35.84	60.76	60.46	37.31	37.15
7	99.75	59.13	35.64	35.65	60.82	60.44	36.95	36.96
8	99.75	59.10	35.71	35.60	60.82	60.41	37.02	36.91
9	99.71	59.15	35.90	35.81	60.78	60.46	37.21	37.12
10	99.68	59.12	35.92	35.82	60.75	60.43	37.23	37.13
11	99.67	59.10	35.95	35.85	60.74	60.41	37.26	37.16
12	99.67	59.10	35.95	35.85	60.74	60.41	37.26	37.16
13	99.67	59.10	36.00	35.85	60.74	60.41	37.31	37.16
14	99.72	59.10	35.68	35.65	60.79	60.41	36.99	36.96
15	99.75	59.10	35.82	35.62	60.82	60.41	37.13	36.93
16	99.67	59.12	35.92	35.83	60.74	60.43	37.23	37.14
17	99.68	59.15	35.95	35.84	60.75	60.46	37.26	37.15
18	99.70	59.15	36.00	35.85	60.77	60.46	37.31	37.16
19	99.69	59.15	36.00	35.88	60.76	60.46	37.31	37.19
20	99.69	59.12	36.00	35.84	60.76	60.43	37.31	37.15
21	99.75	59.11	35.72	35.67	60.82	60.42	37.03	36.98
22	99.75	59.11	35.78	35.60	60.82	60.42	37.09	36.91
23	99.67	59.10	35.90	35.80	60.74	60.41	37.21	37.11
24	99.65	59.12	35.95	35.83	60.72	60.43	37.26	37.14
25	99.65	59.12	35.95	35.85	60.72	60.43	37.26	37.16
26	99.65	59.12	36.00	35.86	60.72	60.43	37.31	37.17
27	99.66	59.12	36.00	35.86	60.73	60.43	37.31	37.17
28	99.70	59.00	35.60	35.64	60.77	60.31	36.91	36.95

TABLE 14—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN AND KEEWATIN, ONTARIO

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

MARCH

1915	Local Datum	W. P. S. Datum			Sea-level Datum			
	Lake	Above Dam	Tail Water	River Bridge	Lake	Above Dam	Tail Water	River Bridge
1	99.70	1059.00	1035.74	1035.56	1060.77	1060.31	1037.05	1036.87
2	99.67	59.05	35.85	35.74	60.74	60.36	37.16	37.05
3	99.68	59.03	35.89	35.75	60.75	60.34	37.20	37.06
4	99.64	59.00	35.90	35.76	60.71	60.31	37.21	37.07
5	99.61	59.00	35.93	35.77	60.68	60.31	37.24	37.08
6	99.60	59.00	35.95	35.77	60.67	60.31	37.26	37.08
7	99.67	59.00	35.59	35.61	60.74	60.31	36.90	36.92
8	99.69	59.02	35.75	35.51	60.76	60.33	37.06	36.82
9	99.65	59.08	35.80	35.72	60.72	60.39	37.11	37.03
10	99.65	59.03	35.85	35.76	60.72	60.34	37.16	37.07
11	99.65	59.00	35.90	35.60	60.72	60.31	37.21	36.91
12	99.65	59.00	35.80	35.53	60.72	60.31	37.11	36.84
13	99.62	59.00	35.70	35.50	60.69	60.31	37.01	36.81
14	99.64	59.00	35.45	35.34	60.71	60.31	36.76	36.65
15	99.63	58.92	35.44	35.30	60.70	60.23	36.75	36.61
16	99.62	58.95	35.40	35.35	60.69	60.26	36.71	36.66
17	99.67	58.95	35.45	35.33	60.74	60.26	36.76	36.64
18	99.58	58.95	35.50	35.33	60.65	60.26	36.81	36.64
19	99.62	58.95	35.55	35.34	60.69	60.26	36.86	36.65
20	99.61	58.95	35.50	35.35	60.68	60.26	36.81	36.66
21	99.65	58.95	35.30	35.22	60.72	60.26	36.61	36.53
22	99.65	58.95	35.27	35.18	60.72	60.26	36.58	36.49
23	99.62	58.95	35.35	35.26	60.69	60.26	36.66	36.57
24	99.65	58.95	35.37	35.31	60.72	60.26	36.68	36.62
25	99.61	58.95	35.38	35.35	60.68	60.26	36.69	36.66
26	99.63	58.95	35.40	35.38	60.70	60.26	36.71	36.69
27	99.61	58.95	35.43	35.38	60.68	60.26	36.74	36.69
28	99.63	58.95	35.34	35.24	60.70	60.26	36.65	36.55
29	99.65	59.02	35.50	35.29	60.72	60.33	36.81	36.60
30	99.61	59.05	35.65	35.50	60.68	60.36	36.96	36.81
31	99.61	59.05	35.70	35.53	60.68	60.36	37.01	36.84

APRIL

1	99.61	1058.90	1035.60	1035.41	1060.68	1060.21	1036.91	1036.72
2	99.62	58.90	35.60	35.34	60.69	60.21	36.91	36.65
3	99.61	58.90	35.50	35.35	60.68	60.21	36.81	36.66
4	99.60	58.97	35.35	35.24	60.67	60.28	36.66	36.55
5	99.63	59.02	35.32	35.17	60.70	60.33	36.63	36.48
6	99.65	59.10	35.40	35.20	60.72	60.41	36.71	36.51
7	99.67	59.00	35.50	35.29	60.74	60.31	36.81	36.60
8	99.67	58.25	36.50	35.96	60.74	59.56	37.81	37.27
9	99.69	58.25	37.10	36.91	60.76	59.56	38.41	38.22
10	99.70	58.30	37.45	37.32	60.77	59.61	38.76	38.63
11	99.68	58.22	37.45	37.38	60.75	59.53	38.76	38.69
12	99.70	58.25	37.57	37.50	60.77	59.56	38.88	38.81
13	99.65	58.25	37.80	37.74	60.72	59.56	39.11	39.05
14	99.61	58.25	37.90	37.86	60.68	59.56	39.21	39.17
15	99.62	58.20	38.00	37.95	60.69	59.51	39.31	39.26
16	99.67	58.20	38.10	38.03	60.74	59.51	39.41	39.34
17	99.65	58.20	38.10	38.09	60.72	59.51	39.41	39.40
18	99.70	58.20	37.50	37.96	60.77	59.51	38.81	39.27
19	99.70	58.20	37.80	37.94	60.77	59.51	39.11	39.25
20	99.63	58.25	38.10	38.15	60.70	59.56	39.41	39.46
21	99.63	58.30	38.20	38.18	60.70	59.61	39.51	39.49
22	99.61	58.32	38.30	38.24	60.68	59.63	39.61	39.55
23	99.62	58.35	38.42	38.33	60.69	59.66	39.73	39.64
24	99.70	58.37	38.48	38.44	60.77	59.68	39.79	39.75
25	99.80	58.39	38.22	38.28	60.87	59.70	39.53	39.59
26	99.73	58.35	38.30	38.24	60.80	59.66	39.61	39.55
27	99.75	58.28	38.38	38.42	60.82	59.59	39.69	39.73
28	99.75	58.25	38.45	38.46	60.82	59.56	39.76	39.77
29	99.69	58.20	38.50	38.48	60.76	59.51	39.81	39.79
30	99.68	58.25	38.50	38.49	60.75	59.56	39.81	39.80

TABLE 14—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN AND KEEWATIN, ONTARIO

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

MAY

1915	Local Datum	W. P. S. Datum			Sea-level Datum			
	Lake	Above Dam	Tail Water	River Bridge	Lake	Above Dam	Tail Water	River Bridge
1	99.67	1058.25	1038.45	1038.47	1060.74	1059.56	1039.76	1039.78
2	99.76	58.25	38.22	38.42	60.83	59.56	39.53	39.73
3	99.60	58.27	38.24	38.20	60.67	59.58	39.55	39.51
4	99.75	58.30	38.30	38.38	60.82	59.61	39.61	39.69
5	99.77	58.30	38.35	38.41	60.84	59.61	39.66	39.72
6	99.64	58.40	38.40	38.44	60.71	59.71	39.71	39.75
7	99.82	58.45	38.45	38.53	60.89	59.76	39.76	39.84
8	99.39	58.50	38.45	38.50	60.46	59.81	39.76	39.81
9	99.97	58.50	38.23	38.36	61.04	59.81	39.54	39.67
10	99.86	58.46	38.29	38.28	60.93	59.77	39.60	39.59
11	99.94	58.40	38.35	38.43	61.01	59.71	39.66	39.74
12	99.88	58.45	38.45	38.53	60.95	59.76	39.76	39.84
13	99.95	58.50	38.55	38.58	61.02	59.81	39.86	39.89
14	99.94	58.48	38.50	38.62	61.01	59.79	39.81	39.93
15	99.85	58.45	38.50	38.61	60.92	59.76	39.81	39.92
16	99.75	58.41	38.31	38.41	60.82	59.72	39.62	39.72
17	99.85	58.37	38.25	38.40	60.92	59.68	39.56	39.71
18	99.95	57.50	39.35	39.03	61.02	58.81	40.66	40.34
19	99.97	56.25	40.00	39.70	61.04	57.56	41.31	41.01
20	99.93	55.90	40.15	40.28	61.00	57.21	41.46	41.59
21	99.93	56.50	40.00	40.54	61.00	57.81	41.31	41.85
22	100.00	56.90	39.90	40.35	61.07	58.21	41.21	41.66
23	100.07	57.57	39.82	39.94	61.14	58.88	41.13	41.25
24	99.98	57.52	39.74	39.80	61.05	58.83	41.05	41.11
25	99.82	57.50	39.80	39.82	60.89	58.81	41.11	41.13
26	99.98	57.60	39.90	39.82	61.05	58.91	41.21	41.13
27	100.09	57.60	39.80	39.84	61.16	58.91	41.11	41.15
28	99.98	57.50	39.80	39.82	61.05	58.81	41.11	41.13
29	99.93	57.50	39.80	39.81	61.00	58.81	41.11	41.12
30	99.94	57.50	39.63	39.67	61.01	58.81	40.94	40.98
31	99.93	57.50	39.67	39.65	61.00	58.81	40.98	40.96

JUNE

1	99.95	1057.50	1039.70	1039.71	1061.02	1058.81	1041.01	1041.02
2	99.88	57.50	39.70	39.72	60.95	58.81	41.01	41.03
3	99.84	57.50	39.78	39.69	60.91	58.81	41.09	41.00
4	99.90	57.48	39.80	39.67	60.97	58.79	41.11	40.98
5	100.12	57.45	39.80	39.65	61.19	58.76	41.11	40.96
6	99.75	57.41	39.55	39.55	60.82	58.72	40.86	40.86
7	99.75	57.40	39.56	39.55	60.82	58.71	40.87	40.86
8	99.65	57.40	39.60	39.62	60.72	58.71	40.91	40.93
9	99.85	57.40	39.60	39.69	60.92	58.71	40.91	41.00
10	99.94	57.45	39.65	39.75	61.01	58.76	40.96	41.06
11	99.82	57.50	39.70	39.75	60.89	58.81	41.01	41.06
12	99.88	57.55	39.75	39.73	60.95	58.86	41.06	41.04
13	99.62	57.55	39.52	39.59	60.69	58.86	40.83	40.90
14	100.08	57.60	39.59	39.61	61.15	58.91	40.90	40.92
15	99.90	57.60	39.60	39.69	60.97	58.91	40.91	41.00
16	99.67	57.60	39.60	39.72	60.74	58.91	40.91	41.03
17	100.08	57.80	39.60	39.74	61.15	59.11	40.91	41.05
18	99.98	57.90	39.60	39.77	61.05	59.21	40.91	41.08
19	100.02	57.60	39.60	39.77	61.09	58.91	40.91	41.08
20	100.25	57.61	39.44	39.70	61.32	58.92	40.75	41.01
21	100.28	57.65	39.71	39.76	61.35	58.96	41.02	41.07
22	100.02	57.55	39.70	39.90	61.09	58.86	41.01	41.21
23	100.25	57.65	40.20	39.99	61.32	58.96	41.51	41.30
24	100.23	57.55	40.15	40.01	61.30	58.86	41.46	41.32
25	100.32	57.55	40.15	40.05	61.39	58.86	41.46	41.36
26	100.25	57.68	40.10	40.02	61.32	58.99	41.41	41.33
27	100.48	57.80	39.95	39.99	61.55	59.11	41.26	41.30
28	100.53	57.96	40.02	40.09	61.60	59.27	41.33	41.40
29	100.45	57.25	40.40	40.35	61.52	59.56	41.71	41.66
30	100.57	56.85	40.95	40.67	61.64	58.16	42.26	41.98

TABLE 14—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN AND KEEWATIN, ONTARIO

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

JULY

1915	Local Datum	W. P. S. Datum			Sea-level Datum			
	Lake	Above Dam	Tail Water	River Bridge	Lake	Above Dam	Tail Water	River Bridge
1	100.63	1056.85	1040.95	1040.92	1061.70	1058.16	1042.26	1042.23
2	100.62	56.85	40.98	40.98	61.69	58.16	42.29	42.29
3	100.61	56.85	41.10	41.09	61.68	58.16	42.41	42.40
4	100.47	56.81	40.95	41.09	61.54	58.12	42.26	42.40
5	100.53	56.87	41.04	41.17	61.60	58.18	42.35	42.48
6	100.65	56.90	41.15	41.20	61.72	58.21	42.46	42.51
7	100.65	56.95	41.20	41.29	61.72	58.26	42.51	42.60
8	100.62	56.95	41.25	41.40	61.69	58.26	42.56	42.71
9	100.68	56.98	41.28	41.45	61.75	58.29	42.59	42.76
10	100.73	56.98	41.40	41.48	61.80	58.29	42.71	42.79
11	100.73	56.99	41.22	41.40	61.80	58.30	42.53	42.71
12	100.68	56.99	41.43	41.36	61.75	58.30	42.74	42.67
13	100.69	57.00	41.45	41.44	61.76	58.31	42.76	42.75
14	100.50	57.00	41.45	41.41	61.57	58.31	42.76	42.72
15	100.60	57.03	41.45	41.40	61.67	58.34	42.76	42.71
16	100.60	56.93	41.45	41.39	61.67	58.24	42.76	42.70
17	100.41	56.90	41.40	41.37	61.48	58.21	42.71	42.68
18	100.53	56.86	41.15	41.28	61.60	58.17	42.46	42.59
19	100.50	56.90	41.20	41.26	61.57	58.21	42.51	42.57
20	100.47	56.90	41.40	41.38	61.54	58.21	42.71	42.69
21	100.49	56.90	41.50	41.33	61.56	58.21	42.81	42.64
22	100.53	56.94	41.40	41.31	61.60	58.25	42.71	42.62
23	100.37	56.95	41.42	41.29	61.44	58.26	42.73	42.60
24	100.44	56.60	41.25	41.27	61.51	57.91	42.56	42.58
25	100.45	56.26	41.25	41.37	61.52	57.57	42.56	42.68
26	100.41	55.90	41.45	41.45	61.48	57.21	42.76	42.76
27	100.35	55.78	41.57	41.57	61.42	57.09	42.88	42.88
28	100.35	55.75	41.60	41.65	61.42	57.06	42.91	42.96
29	100.40	55.73	41.62	41.69	61.47	57.04	42.93	43.00
30	100.31	55.70	41.62	41.68	61.38	57.01	42.93	42.99
31	100.21	55.70	41.62	41.65	61.28	57.01	42.93	42.96

AUGUST

1	100.14	1055.70	1041.37	1041.53	1061.21	1057.01	1042.68	1042.84
2	100.13	55.70	41.39	41.47	61.20	57.01	42.70	42.78
3	100.17	55.70	41.50	41.56	61.24	57.01	42.81	42.87
4	100.06	55.70	41.55	41.53	61.13	57.01	42.86	42.84
5	100.04	55.68	41.60	41.51	61.11	56.99	42.91	42.82
6	100.03	55.65	41.60	41.49	61.10	56.96	42.91	42.80
7	99.98	55.65	41.60	41.47	61.05	56.96	42.91	42.78
8	100.00	55.57	41.45	41.38	61.07	56.88	42.76	42.69
9	100.01	55.97	41.53	41.30	61.08	57.28	42.84	42.61
10	100.00	56.20	41.35	41.14	61.07	57.51	42.66	42.45
11	100.02	56.40	41.10	41.04	61.09	57.71	42.41	42.35
12	99.93	56.35	41.00	40.99	61.00	57.66	42.31	42.30
13	99.92	56.25	41.00	40.97	60.99	57.56	42.31	42.28
14	99.85	56.10	41.00	40.98	60.92	57.41	42.31	42.29
15	99.80	56.00	40.87	40.89	60.87	57.31	42.18	42.20
16	99.65	55.87	40.83	40.79	60.72	57.18	42.14	42.10
17	99.80	56.10	40.75	40.83	60.87	57.41	42.06	42.14
18	99.78	56.20	40.65	40.79	60.85	57.51	41.96	42.10
19	99.70	56.30	40.60	40.74	60.77	57.61	41.91	42.05
20	99.69	56.50	40.30	40.55	60.76	57.81	41.61	41.86
21	99.61	57.72	39.55	39.91	60.68	59.03	40.86	41.22
22	99.68	58.28	39.12	39.07	60.75	59.59	40.43	40 38
23	99.75	58.47	38.56	38.66	60.82	59.78	39.87	39.97
24	99.45	58.55	38.10	38.35	60.52	59.86	39.41	39.66
25	99.41	58.58	37.80	38.02	60.48	59.89	39.11	39.33
26	99.61	58.60	37.60	37.58	60.68	59.91	38.91	38.89
27	99.76	58.55	37.32	37.41	60.83	59.86	38.63	38.72
28	99.63	58.50	37.15	37.24	60.70	59.81	38.46	38.55
29	99.48	58.42	37.03	37.07	60.55	59.73	38.34	38.38
30	99.66	58.34	37.27	37.08	60.73	59.65	38.58	38.39
31	99.60	58.25	37.40	36.98	60.67	59.56	38.71	38.29

TABLE 14—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN AND KEEWATIN, ONTARIO

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

SEPTEMBER

1915	Local Datum	W. P. S. Datum			Sea-level Datum			
	Lake	Above Dam	Tail Water	River Bridge	Lake	Above Dam	Tail Water	River Bridge
1	99.52	1058.32	1037.30	1037.00	1060.59	1059.63	1038.61	1038.31
2	99.51	58.38	37.20	37.09	60.58	59.69	38.51	38.40
3	99.60	58.45	37.10	37.10	60.67	59.76	38.41	38.41
4	99.50	58.50	37.15	37.05	60.57	59.81	38.46	38.36
5	99.60	58.50	37.00	36.94	60.67	59.81	38.31	38.25
6	99.50	58.50	37.04	36.78	60.57	59.81	38.35	38.09
7	99.45	58.48	37.12	36.93	60.52	59.79	38.43	38.24
8	99.58	58.46	37.15	36.97	60.65	59.77	38.46	38.28
9	99.47	58.48	37.15	36.96	60.54	59.79	38.46	38.27
10	99.34	58.50	37.12	36.97	60.41	59.81	38.43	38.28
11	99.32	58.52	37.10	36.94	60.39	59.83	38.41	38.25
12	99.46	58.55	36.99	36.78	60.53	59.86	38.30	38.09
13	99.30	58.55	36.99	36.70	60.37	59.86	38.30	38.01
14	99.22	58.45	37.00	36.84	60.29	59.76	38.31	38.15
15	99.43	58.33	37.00	36.92	60.50	59.64	38.31	38.23
16	99.45	58.20	37.00	36.95	60.52	59.51	38.31	38.26
17	99.31	58.25	37.00	36.95	60.38	59.56	38.31	38.26
18	99.14	58.28	37.00	36.93	60.21	59.59	38.31	38.24
19	99.39	58.31	36.87	36.75	60.46	59.62	38.18	38.06
20	98.68	48.35	36.95	36.66	59.75	59.66	38.26	37.97
21	99.22	58.35	36.95	36.77	60.29	59.66	38.26	38.08
22	99.34	58.40	36.90	36.86	60.41	59.71	38.21	38.17
23	99.21	58.10	36.90	36.88	60.28	59.41	38.21	38.19
24	99.10	58.12	37.90	36.85	60.17	59.43	38.21	38.16
25	99.19	58.15	36.90	36.89	60.26	59.46	38.21	38.20
26	99.00	58.19	36.67	36.71	60.07	59.50	37.98	38.02
27	99.22	58.27	36.66	36.63	60.29	59.58	37.97	37.94
28	99.30	58.35	36.75	36.84	60.37	59.66	38.06	38.15
29	99.27	58.48	36.85	36.88	60.34	59.79	38.16	38.19
30	99.27	58.58	36.55	36.73	60.34	59.89	37.86	38.04

OCTOBER

1	99.28	1058.70	1036.40	1036.30	1060.35	1060.01	1037.71	1037.61
2	99.37	58.87	36.45	36.16	60.44	60.18	37.76	37.47
3	99.15	59.00	36.11	35.83	60.22	60.31	37.42	37.14
4	98.85	59.00	36.15	35.62	59.92	60.31	37.46	36.93
5	99.27	59.00	36.20	35.84	60.34	60.31	37.51	37.15
6	99.06	58.95	36.17	35.91	60.13	60.26	37.48	37.22
7	98.75	58.90	36.13	35.87	59.82	60.21	37.44	37.18
8	99.87	58.83	36.08	35.85	59.94	60.14	37.39	37.16
9	99.40	58.76	36.00	35.84	60.47	60.07	37.31	37.15
10	99.20	58.73	35.83	35.62	60.27	60.04	37.14	36.93
11	99.14	58.69	35.88	35.55	60.21	60.00	37.19	36.86
12	99.29	58.65	35.88	35.69	60.36	59.96	37.19	37.00
13	99.18	58.62	35.84	35.73	60.25	59.93	37.15	37.04
14	99.18	58.65	35.80	35.74	60.25	59.96	37.11	37.05
15	99.26	58.65	35.78	35.74	60.33	59.96	37.09	37.05
16	99.18	58.63	35.78	35.73	60.25	59.94	37.09	37.04
17	99.21	58.60	35.54	35.52	60.28	59.91	36.85	36.83
18	99.18	58.57	35.62	35.51	60.25	59.88	36.93	36.82
19	99.28	58.52	35.68	35.61	60.35	59.83	36.99	36.92
20	99.10	58.48	35.70	35.61	60.17	59.79	37.01	36.92
21	99.11	58.45	35.70	35.62	60.18	59.76	37.01	36.93
22	99.10	58.49	35.72	35.64	60.17	59.80	37.03	36.95
23	99.05	58.55	35.80	35.66	60.12	59.86	37.11	36.97
24	99.18	58.63	35.59	35.65	60.25	59.94	36.90	36 96
25	99.25	58.71	35.68	35.69	60.32	60.02	36.99	37.00
26	98.92	58.77	35.85	35.69	59.99	60.08	37.16	37.00
27	99.32	58.78	35.85	35.69	60.39	60.09	37.16	37.00
28	98.95	58.77	35.85	35.70	60.02	60.08	37.16	37.01
29	99.07	58.76	35.85	35.71	60.14	60.07	37.16	37.02
30	99.08	58.75	35.85	35.71	60.15	60.06	37.16	37.02
31	99.15	58.75	35.85	35.67	60.22	60.06	37.16	36.98

TABLE 14—Continued

WATER LEVELS—LAKE OF THE WOODS—NORMAN AND KEEWATIN, ONTARIO

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

NOVEMBER

1915	Local Datum	W. P. S. Datum			Sea-level Datum			
	Lake	Above Dam	Tail Water	River Bridge	Lake	Above Dam	Tail Water	River Bridge
1	98.95	1058.68	1035.86	1035.65	1060.02	1059.99	1037.17	1036.96
2	98.97	58.62	35.80	35.63	60.04	59.93	37.11	36.94
3	99.10	58.59	35.75	35.64	60.17	59.90	37.06	36.95
4	98.95	58.63	35.77	35.66	60.02	59.94	37.08	36.97
5	99.20	58.68	35.80	35.66	60.27	59.99	37.11	36.97
6	99.05	58.72	35.83	35.65	60.12	60.03	37.14	36.96
7	98.93	58.75	35.82	35.63	60.00	60.06	37.13	36.94
8	99.05	58.77	35.80	35.64	60.12	60.08	37.11	36.95
9	99.05	58.78	35.80	35.69	60.12	60.09	37.11	37.00
10	99.37	58.78	35.80	35.72	60.44	60.09	37.11	37.03
11	99.02	58.75	35.81	35.71	60.09	60.06	37.12	37.02
12	99.32	58.61	35.83	35.70	60.39	59.92	37.14	37.01
13	99.10	58.60	35.82	35.67	60.17	59.91	37.13	36.98
14	99.05	58.58	35.81	35.65	60.12	59.89	37.12	36.96
15	99.10	58.57	35.80	35.69	60.17	59.88	37.11	37.00
16	99.13	58.58	35.80	35.71	60.20	59.89	37.11	37.02
17	99.20	58.58	35.80	35.72	60.27	59.89	37.11	37.03
18	99.20	58.56	35.80	35.73	60.27	59.87	37.11	37.04
19	98.90	58.56	35.80	35.73	59.97	59.87	37.11	37.04
20	99.10	58.56	35.80	35.72	60.17	59.87	37.11	37.03
21	98.90	58.56	35.77	35.69	59.97	59.87	37.08	37.00
22	99.14	58.55	35.76	35.69	60.21	59.86	37.07	37.00
23	99.10	58.54	35.75	35.69	60.17	59.85	37.06	37.00
24	99.10	58.55	35.75	35.67	60.17	59.86	37.06	36.98
25	99.00	58.55	35.77	35.67	60.07	59.86	37.08	36.98
26	99.10	58.56	35.77	35.67	60.17	59.87	37.08	36.98
27	99.08	58.56	35.77	35.65	60.15	59.87	37.08	36.96
28	99.15	58.56	35.77	35.62	60.22	59.87	37.08	36.93
29	99.05	58.56	35.77	35.63	60.12	59.87	37.08	36.94
30	99.10	58.56	35.77	35.65	60.17	59.87	37.08	36.96

DECEMBER

1	99.10	1058.56	1035.77	1035.67	1060.17	1059.87	1037.08	1036.98
2	99.13	58.56	35.77	35.66	60.20	59.87	37.08	36.97
3	99.08	58.56	35.77	35.67	60.15	59.87	37.08	36.98
4	99.08	58.56	35.77	35.65	60.15	59.87	37.08	36.96
5	99.13	.....	.....	35.39	60.20	.....	.....	36.70
6	99.08	.....	.....	35.28	60.15	.....	.....	36.59
7	99.12	.....	.....	35.51	60.19	.....	.....	36.82
8	99.10	.....	.....	35.51	60.17	.....	.....	36.82
9	99.13	58.56	35.55	35.49	60.20	59.87	36.86	36.80
10	99.10	58.54	35.65	35.55	60.17	59.85	36.96	36.86
11	99.12	58.54	35.68	35.60	60.19	59.85	36.99	36.91
12	99.13	58.57	35.68	35.57	60.20	59.88	36.99	36.88
13	99.15	58.58	35.69	35.60	60.22	59.89	37.00	36.91
14	99.10	58.58	35.75	35.67	60.17	59.89	37.06	36.98
15	99.12	58.56	35.77	35.69	60.19	59.87	37.08	37.00
16	99.15	58.61	35.80	35.73	60.22	59.92	37.11	37.04
17	99.15	58.63	35.80	35.77	60.22	59.94	37.11	37.08
18	99.15	58.63	35.80	35.77	60.22	59.94	37.11	37.08
19	99.17	58.63	35.75	35.70	60.24	59.94	37.06	37.01
20	99.17	58.62	35.75	35.66	60.24	59.93	37.06	36.97
21	99.17	58.61	35.75	35.73	60.24	59.92	37.06	37.04
22	99.17	58.61	35.77	35.74	60.24	59.92	37.08	37.05
23	99.17	58.61	35.77	35.74	60.24	59.92	37.08	37.05
24	99.17	58.63	35.75	35.69	60.24	59.94	37.06	37.00
25	99.20	58.55	35.35	35.42	60.27	59.86	36.66	36.73
26	99.20	58.65	35.25	35.15	60.27	59.96	36.56	36.46
27	99.20	58.66	35.58	35.45	60.27	59.97	36.89	36.76
28	99.16	58.61	35.70	35.59	60.23	59.92	37.01	36.90
29	99.16	58.61	35.75	35.64	60.23	59.92	37.06	36.95
30	99.16	58.63	35.77	35.72	60.23	59.94	37.08	37.03
31	99.16	58.66	35.77	35.74	60.23	59.97	37.08	37.05

TABLE 23—Continued

WATER LEVELS—WINNIPEG RIVER—MINAKI, ONTARIO

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

1915	May		June		July		August	
	W. P. S. Datum	Sea-level Datum	W. P. S. Datum	Sea-level Datum	W. P. S. Datum	Sea-level Datum	W. P. S. Datum	Sea-level Datum
1			1035.39	1036.70	1035.58	1036.89	1036.46	1037.77
2			35.37	36.68	35.71	37.02	36.43	37.74
3			35.38	36.69	35.92	37.23	36.41	37.72
4			35.37	36.68	35.94	37.25	36.40	37.71
5			35.37	36.68	36.00	37.31	36.40	37.71
6			35.43	36.74	36.21	37.52	36.38	37.69
7			35.33	36.64	36.41	37.72	36.36	37.67
8			35.29	36.60	36.46	37.77	36.32	37.63
9			35.34	36.65	36.34	37.65	36.28	37.59
10			35.36	36.67	36.26	37.57	36.16	37.47
11			35.43	36.74	36.30	37.61	36.14	37.45
12			35.38	36.69	36.34	37.65	36.13	37.44
13			35.37	36.68	36.37	37.68	36.06	37.37
14			35.32	36.63	36.37	37.68	36.04	37.35
15			35.37	36.68	36.36	37.67	36.04	37.35
16			35.34	36.65	36.38	37.69	36.04	37.35
17			35.39	36.70	36.34	37.65	36.02	37.33
18	1034.66	1035.97	35.41	36.72	36.33	37.64	36.02	37.33
19	34.98	36.29	35.39	36.70	36.31	37.62	36.01	37.32
20	35.34	36.65	35.39	36.70	36.30	37.61	36.00	37.31
21	35.42	36.73	35.42	36.73	36.32	37.63	35.99	37.30
22	35.47	36.78	35.41	36.72	36.31	37.62	35.98	37.29
23	35.47	36.78	35.44	36.75	36.30	37.61	35.75	37.06
24	35.49	36.80	35.45	36.76	36.29	37.60	35.71	37.02
25	35.48	36.79	35.49	36.80	36.22	37.53	35.61	36.92
26	35.46	36.77	35.52	36.83	36.27	37.58	35.52	36.83
27	35.46	36.77	35.42	36.73	36.29	37.60	35.46	36.77
28	35.46	36.77	35.46	36.77	36.33	37.64	35.42	36.73
29	35.45	36.76	35.49	36.80	36.38	37.69	35.29	36.60
30	35.45	36.76	35.52	36.83	36.43	37.74	35.17	36.48
31	35.44	36.75			36.44	37.75	35.04	36.35

1915	September		October		November		December	
	W. P. S. Datum	Sea-level Datum	W. P. S. Datum	Sea-level Datum	W. P. S. Datum	Sea-level Datum	W. P. S. Datum	Sea-level Datum
1	1034.85	1036.16	1033.53	1034.84	1032.97	1034.28	1032.98	1034.29
2	34.69	36.00	33.49	34.80	32.96	34.27	32.99	34.30
3	34.46	35.77	33.45	34.76	32.96	34.27	32.99	34.30
4	34.25	35.56	33.38	34.69	32.96	34.27	32.99	34.30
5	34.20	35.51	33.34	34.65	32.95	34.26	32.96	34.27
6	33.76	35.07	33.25	34.56	32.96	34.27	32.94	34.25
7	33.78	35.09	33.19	34.50	32.99	34.30	32.93	34.24
8	33.81	35.12	33.16	34.47	33.03	34.34	32.92	34.23
9	33.66	34.97	33.12	34.43	33.06	34.37	32.91	34.22
10	33.66	34.97	33.09	34.40	33.08	34.39	32.92	34.23
11	33.66	34.97	33.05	34.36	33.10	34.41	32.93	34.24
12	33.66	34.97	33.04	34.35	33.09	34.40	32.93	34.24
13	33.66	34.97	33.04	34.35	33.07	34.38	32.94	34.25
14	33.63	34.94	33.03	34.34	33.06	34.37	32.94	34.25
15	33.63	34.94	33.02	34.33	33.05	34.36	32.95	34.26
16	33.63	34.94	33.02	34.33	33.04	34.35	32.98	34.29
17	33.63	34.94	33.01	34.32	33.03	34.34	32.99	34.30
18	33.63	34.94	32.99	34.30	33.03	34.34	32.98	34.29
19	33.61	34.92	32.98	34.29	33.02	34.33	32.99	34.30
20	33.61	34.92	32.96	34.27	33.03	34.34	33.00	34.31
21	33.61	34.92	32.94	34.25	33.02	34.33	33.00	34.31
22	33.61	34.92	32.93	34.24	33.01	34.32	33.00	34.31
23	33.58	34.89	32.92	34.23	33.01	34.32	33.00	34.31
24	33.58	34.89	32.95	34.26	33.00	34.31	33.00	34.31
25	33.58	34.89	32.95	34.26	32.99	34.30	33.00	34.31
26	33.57	34.88	32.96	34.27	32.99	34.30	32.97	34.28
27	33.57	34.88	32.96	34.27	32.98	34.29	32.94	34.25
28	33.57	34.88	32.97	34.28	32.98	34.29	32.92	34.23
29	33.56	34.87	32.97	34.28	32.97	34.28	32.91	34.22
30	33.56	34.87	32.97	34.28	32.97	34.28	32.92	34.23
31			32.98	34.29			32.94	34.25

TABLE 28—Continued

RELATION BETWEEN VARIOUS GAUGES—LAKE OF THE WOODS—WESTERN OUTLET

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

1915	Discharge c. f. s.	Gauge No. 1 or Lake Sea-level Datum	Fall (1) Lake to No. 3	Fall (2) Lake to No. 11	1915	Discharge c. f. s.	Gauge No. 1 or Lake Sea-level Datum	Fall (1) Lake to No. 3	Fall (2) Lake to No. 11
Jan. 8	7518	1060.84	0.18	*0.42	Aug. 16	21572	1060.78	0.93	3.67
14	7665	60.84	0.13	0.39	27	11305	60.91	0.35	0.90
22	7700	60.84	0.15	0.39	30	11110	60.81	0.30	0.86
Feb. 6	7434	60.86	0.14	0.40	Sept. 3	10786	60.69	0.36	0.91
16	7673	60.83	0.14	0.41	8	10925	60.71	0.38	0.92
Mar. 9	7498	1060.78	0.15	*0.41	13	10374	1060.39	0.25	0.75
18	7425	60.70	0.15	*0.39	17	10314	60.46	0.11	0.59
Apr. 6	7613	60.81	0.14	*0.47	22	10589	60.49	0.23	0.70
10	13476	60.82	0.36	*1.24	27	10005	60.33	0.18	0.66
22	13141	60.68	0.29	*1.12	Oct. 1	7138	60.39	0.17	0.39
May 11	13664	1061.01	0.33	*1.20	4	6776	1059.99	0.12	0.30
18	17783	61.05	0.57	2.31	8	7087	60.10	0.07	0.25
18	19226	61.06	0.65	2.68	13	7160	60.31	0.18	0.37
19	20885	61.08	0.78	3.42	18	7194	60.36	0.16	0.37
20	22804	61.00	0.83	4.07	22	7014	60.26	0.15	0.45
21	22481	1061.05	0.93	4.32	27	7384	1060.51	0.20	0.43
21	21666	61.00	0.78	3.74	Nov. 3	6960	60.26	0.13	0.33
31	17579	61.02	0.54	2.23	10	7170	60.51	0.23	0.41
June 7	17416	60.93	0.59	2.21	13	6748	60.21	0.07	0.26
25	18682	61.46	0.74	2.45	15	6814	60.26	0.13	0.35
30	22340	1061.65	0.86	3.60	22	6739	1060.13	0.08	0.25
July 5	23375	61.70	0.78	3.54	26	6911	60.25	0.14	0.34
12	23422	61.66	0.66	3.41	Dec. 1	6623	60.25	0.16	0.35
16	23417	61.72	0.73	3.48	6	6630	60.26	0.16	*0.39
22	22819	61.65	0.81	3.46	10	6625	60.24	0.20	0.41
28	24580	1061.45	0.93	4.36	15	6821	1060.21	0.15	0.39
Aug. 2	23671	61.24	0.98	4.34	21	6931	60.31	0.21	0.43
5	23348	61.16	0.94	4.30	24	6846	60.31	0.18	0.40
11	21142	61.16	0.83	3.47	28	6719	60.31	0.16	0.40

* The reading for No. 11 on this date was missing, and No. 12 was substituted in obtaining fall. (Engrs.)
(1) M. H. S. Gauge No. 3 corresponds in approximate location to J. C. Kennedy's Gauge No. 7. (Engrs.)
(2) M. H. S. Gauge No. 11 corresponds in approximate location to J. C. Kennedy's Gauge No. 2. (Engrs.)

TABLE 31—Continued

WATER LEVELS—RAINY LAKE—RANIER, MINN.

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. Datum]

Day.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.*
1915												
1	494.55	493.15	492.10	490.55	490.90	491.50	494.34	495.75	496.00	496.00	496.15	.....
2	494.50	493.20	492.00	490.60	490.75	491.50	494.35	495.77	495.95	495.97	496.26	.....
3	494.60	493.15	491.95	490.40	490.70	491.55	494.45	495.80	495.90	496.15	496.30	.....
4	494.55	493.10	491.90	490.80	490.60	491.60	494.50	495.75	495.95	496.00	496.31	.....
5	494.40	493.05	491.85	490 35	490.58	491.60	494.60	495.75	496.05	496.00	496.35	.....
6	494.40	493.05	491.80	490.30	490.59	491.55	494.55	495.75	496.10	495.95	496.35	.....
7	494.30	493.00	492.00	490.40	490.60	491.65	494.60	495.80	496.05	495.95	.....	.....
8	494.25	492.95	491.75	490.35	491.20	491.70	494.65	495.92	496.02	495.97	496.32	.....
9	494.20	492.90	491.70	490.20	491.10	491.75	494.70	495.82	496.05	495.97	496.65	.....
10	494.30	492.85	491.65	490.30	490.80	491.80	494.75	495.85	495.95	496.00	496.58	.....
11	494.20	492.85	491.60	490.70	490.75	491.90	494.85	495.85	496.00	495.90	496.54	.....
12	494.10	492.80	491.55	490.35	490.78	492.15	494.85	495.85	496.05	495.93	496.45	.....
13	494.05	492.80	491.50	490.30	490.78	492.25	494.95	495.75	496.05	495.97	496.62	.....
14	494.00	492.80	491.70	490.20	490.80	492.40	495.05	495.80	495.90	495.97	496.73	.....
15	493.95	492.70	491.40	490.15	491.38	492.50	495.05	496.00	495.93	495.98	496.73	.....
16	493.90	492.60	491.35	490.15	491.10	492.70	495.05	495.95	495.93	495.98	496.80	.....
17	493.80	492.65	491.40	490.20	491.10	492.75	495.15	495.92	495.90	496.10	496.80	.....
18	493.75	492.60	491.40	490.70	491.05	493.05	495.20	495.92	495.95	496.03	496.82	.....
19	493.75	492.50	491.20	490.35	491.00	492.95	495.20	495.95	496.00	495.97	496.81	.....
20	493.70	492.45	491.20	490.30	491.00	493.00	495.25	495.95	496.00	496.03	496.81	.....
21	493.70	492.40	491.20	490.30	491.00	492.90	495.30	495.95	495.97	495.98	496.85	.....
22	493.65	492.30	491.10	490.30	491.40	493.20	495.40	495.95	495.90	496.08	496.95	.....
23	493.60	492.35	491.15	490.30	491.20	493.25	495.50	495.80	495.93	496.18	496.95	.....
24	493.60	492.30	491.05	490.85	491.60	493.35	495.55	495.90	496.00	496.25	497.00	.....
25	493.50	492.20	490.85	490.90	491.26	493.50	495.60	495.95	495.95	495.90	497.00	.....
26	493.45	492.15	490.85	490.50	491.40	493.60	495.65	495.92	496.15	496.12	497.00	.....
27	493.40	492.15	490.75	490.50	491.40	493.80	495.65	495.90	496.05	496.15	497.00	.....
28	493.30	492.15	490.95	490.30	491.35	493.95	495.65	496.00	496.00	496.15	.....	.....
29	493.30	.....	490.80	490.60	491.60	494.05	495.60	495.97	496.00	496.18	497 00	.....
30	493.25	.....	490.65	490.55	491.50	494.15	495.65	495.95	496.00	496.18	497.05	.....
31	493.20	.....	490.60	.....	491.69	.....	495.70	495.97	.....	496.17	.....	.....

* Automatic Gauge Removed.

TABLE 31A

WATER LEVELS—RAINY LAKE—NORTHERN CONSTRUCTION COMPANY

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. Datum]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1915												
1	.....	.....	.....	.....	.....	491.80	494.25	495.80	496.01	496.04	496.18	497.05
2	.....	.....	.....	.....	.....	491.75	494.35	495.80	495.99	496.04	496.28	497.05
3	.....	.....	.....	.....	.....	491.75	494.45	495.85	496.01	496.09	496.38	497.10
4	.....	.....	.....	.....	.....	491.75	494.50	495.85	496.01	496.02	496.33	497.10
5	.....	.....	.....	.....	.....	491.80	494.50	495.85	496.02	496.01	496.38	497.12
6	.....	.....	.....	.....	.....	491.80	494.65	495.85	496.06	496.03	496.44	497.14
7	.....	.....	.....	.....	.....	491.90	494.70	495.85	496.09	496.02	496.44	497.11
8	.....	.....	.....	.....	.....	491.95	494.70	495.90	496.02	496.02	496.46	497.14
9	.....	.....	.....	.....	.....	492.00	494.80	495.90	496.04	496.02	496.70	497.16
10	.....	.....	.....	.....	.....	492.10	494.85	495.95	495.99	495.99	496.70	497.16
11	.....	.....	.....	.....	.....	492.15	494.90	495.95	496.02	495.99	496.60	497.16
12	.....	.....	.....	.....	.....	492.30	494.95	495.95	496.04	495.97	496.50	497.16
13	.....	.....	.....	.....	.....	492.40	495.00	495.95	496.05	495.98	496.65	497.16
14	.....	.....	.....	.....	.....	492.45	495.10	495.95	495.96	496.02	496.70	497.16
15	.....	.....	.....	.....	.....	492.60	495.10	495.95	495.96	496.00	496.74	497.16
16	.....	.....	.....	.....	.....	492.80	495.10	496.00	495.97	496.02	496.77	497.16
17	.....	.....	.....	.....	.....	492.90	495.15	496.00	495.98	496.05	496.78	497.16
18	.....	.....	.....	.....	.....	493.05	495.20	496.00	495.96	496.04	496.83	497.16
19	.....	.....	.....	.....	.....	493.10	495.30	496.00	496.06	496.04	496.80	497.16
20	.....	.....	.....	.....	.....	493.10	495.30	496.00	495.99	496.04	496.84	497.16
21	.....	.....	.....	.....	.....	493.05	495.35	496.00	495.99	496.02	496.79	497.15
22	.....	.....	.....	.....	.....	493.30	495.40	.....	495.98	496.10	496.92	497.15
23	.....	.....	.....	.....	.....	493.40	495.60	.....	495.96	496.15	496.94	497.16
24	.....	.....	.....	.....	.....	493.50	495.55	.....	496.08	496.23	496.96	497.16
25	.....	.....	.....	.....	.....	493.60	495.60	496.00	496.00	495.96	497.00	497.15
26	.....	.....	.....	.....	.....	493.65	495.65	496.00	496.08	496.12	497.00	497.15
27	.....	.....	.....	.....	.....	493.80	495.65	495.95	496.11	496.18	497.01	.....
28	.....	.....	.....	.....	.....	493.95	495.70	495.95	496.06	496.19	497.01	497.15
29	.....	.....	.....	.....	.....	494.05	495.70	496.00	496.07	496.22	497.01	497.15
30	.....	.....	.....	.....	.....	494.15	495.70	495.95	496.04	496.34	497.03	497.15
31	.....	.....	.....	.....	.....	.....	495.75	496.00	.....	496.10	.....	497.15

TABLE 32—Continued

WATER LEVELS—RAINY LAKE—KETTLE FALLS

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. Datum]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1915												
1	494.85	493.45	492.45	491.10	491.23	491.85	494.45	495.90	496.10	496.10	496.65	497.21
2	494.75	493.40	492.40	491.05	491.24	491.85	494.60	495.85	496.00	496.05	496.50	497.55
3	494.70	493.35	492.35	491.05	491.20	491.85	494.65	495.90	496.05	496.15	496.40	497.15
4	494.65	493.35	492.30	490.95	491.25	491.90	494.70	495.95	496.10	496.35	496.40	497.10
5	494.85	493.35	492.25	491.00	491.26	491.85	494.80	495.95	496.15	496.10	496.35	497.10
6	494.65	493.30	492.20	490.95	491.28	492.20	494.85	495.95	496.15	496.10	496.45	497.10
7	494.60	493.25	492.15	490.90	491.40	492.10	494.80	496.00	496.20	496.25	496.40	497.55
8	494.50	493.20	492.10	490.90	491.50	492.05	494.85	496.00	496.15	496.20	496.75	497.22
9	494.45	493.15	492.10	490.90	491.42	492.15	494.80	496.00	496.20	496.10	496.65	497.20
10	494.40	493.10	492.05	490.85	491.43	492.10	494.80	496.00	496.25	496.05	496.50	497.20
11	494.40	493.10	492.00	490.95	491.45	492.25	494.85	496.00	496.20	496.05	497.00	497.20
12	494.35	493.05	491.95	490.90	491.52	492.30	495.05	496.05	496.05	496.05	496.90	497.20
13	494.30	493.00	491.90	490.85	491.55	492.65	495.10	496.05	496.05	496.00	496.80	497.25
14	494.30	493.00	491.85	490.80	491.56	492.65	495.15	496.05	496.20	496.00	496.80	497.25
15	494.25	493.00	491.85	490.90	491.42	492.80	495.20	496.10	496.05	496.00	496.80	497.20
16	494.20	492.95	491.80	490.90	491.60	493.00	495.30	496.05	496.15	496.05	496.85	497.20
17	494.15	492.90	491.75	490.90	491.55	492.95	495.40	496.05	496.05	496.05	496.75	497.25
18	494.10	492.85	491.70	490.95	491.65	493.10	495.30	496.05	496.20	496.10	496.70	497.25
19	494.05	492.80	491.70	491.00	491.66	493.20	495.40	496.10	496.05	496.10	497.15	497.25
20	494.00	492.75	491.65	491.00	491.62	493.25	495.50	496.15	496.40	496.20	497.00	497.25
21	493.95	492.75	491.60	491.05	491.63	493.30	495.55	496.10	496.10	496.25	497.20	497.25
22	493.90	492.75	491.60	491.05	491.65	493.55	495.55	496.10	496.00	496.15	496.95	497.25
23	493.85	492.70	491.50	491.10	491.68	493.45	495.65	496.15	496.10	496.15	497.00	497.25
24	493.80	492.65	491.50	491.10	491.70	493.60	495.70	496.18	496.00	496.10	497.00	497.20
25	493.75	492.60	491.45	491.15	491.71	493.65	495.70	496.25	496.20	496.35	497.10	497.20
26	493.75	492.55	491.40	491.10	491.72	493.75	495.75	496.10	496.10	496.45	497.05	497.28
27	493.70	492.50	491.30	491.20	491.73	493.90	495.80	496.05	496.00	496.35	497.10	497.30
28	493.60	492.45	491.30	491.20	491.75	494.15	495.90	496.05	496.00	496.50	497.25	497.23
29	493.60	.....	491.25	491.20	491.77	494.30	495.90	496.10	496.05	496.50	497.25	497.27
30	493.50	.....	491.20	491.20	491.80	494.35	495.90	496.10	496.10	496.35	497.20	497.30
31	493.50	.....	491.15	.....	491.82	.....	495.95	496.05	.....	496.40	.....	497.25

TABLE 33—Continued

WATER LEVELS—RAINY RIVER—FORT FRANCES, ONTARIO, UPPER (D. P. W.) POWER HOUSE GAUGE

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. Datum]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1915												
1	494.20	492.75	491.63	489.90	490.00	490.55	494.07	495.52	495.70	495.70	495.92	496.75
2	494.10	492.80	491.50	489.90	489.95	490.63	493.95	495.52	495.70	495.70	496.05	496.75
3	494.25	492.70	491.40	489.80	489.90	490.70	494.15	495.45	495.67	495.90	496.05	496.78
4	494.10	492.65	491.30	490.25	489.65	490.70	494.27	495.42	495.65	495.73	496.05	496.77
5	493.95	492.65	491.20	489.68	489.68	490.75	494.37	495.42	495.83	495.70	496.10	497.00
6	493.90	492.65	491.18	489.43	489.80	490.75	494.20	495.47	495.92	495.72	496.10	496.92
7	493.90	492.78	491.43	489.60	489.70	491.13	494.18	495.47	495.78	495.72	496.37	496.82
8	493.85	492.70	491.25	489.38	490.45	491.20	494.30	495.55	495.68	495.68	495.97	496.83
9	493.80	492.60	491.00	489.30	490.90	491.13	494.33	495.55	495.70	495.67	496.32	496.82
10	493.90	492.50	491.13	489.30	489.95	491.20	494.45	495.55	495.72	495.88	496.33	496.82
11	493.78	492.40	491.08	490.10	489.40	491.35	494.57	495.55	495.70	495.68	496.25	496.83
12	493.70	492.35	490.90	489.70	489.00	491.53	494.58	495.52	495.82	495.68	496.22	496.93
13	493.60	492.35	490.95	489.45	489.03	491.70	494.63	495.52	495.73	495.68	496.35	496.88
14	493.50	492.25	491.20	489.05	489.03	491.78	494.67	495.55	495.65	495.72	496.55	496.80
15	493.45	492.23	490.83	488.98	489.85	492.08	494.67	495.63	495.63	495.72	496.52	496.82
16	493.40	492.33	490.73	488.90	489.95	492.25	494.62	495.70	495.67	495.82	496.57	496.80
17	493.40	492.20	490.78	489.05	489.95	492.33	494.82	495.67	495.70	495.97	496.63	496.82
18	493.45	492.15	490.75	489.80	490.10	492.43	494.83	495.65	495.62	495.82	496.57	496.75
19	493.40	492.05	490.55	489.65	489.75	492.55	494.97	495.63	495.87	495.85	496.62	496.92
20	493.35	492.00	490.45	489.23	489.65	492.65	494.92	495.63	495.65	495.78	496.63	496.83
21	493.30	491.90	490.75	489.15	489.50	492.58	495.03	495.68	495.67	495.75	496.68	496.82
22	493.25	491.93	490.53	489.10	490.35	492.73	495.03	495.80	495.63	495.85	496.70	496.83
23	493.20	491.88	490.50	489.15	490.38	492.88	495.25	495.57	495.67	495.98	496.68	496.82
24	493.20	491.83	490.45	489.80	490.75	493.00	495.23	495.67	495.67	496.08	496.75	496.82
25	493.20	491.83	490.10	490.20	490.83	493.13	495.33	495.70	495.67	495.78	496.75	496.95
26	493.10	491.75	489.80	489.78	490.43	493.20	495.25	495.65	495.93	495.85	496.75	497.10
27	493.00	491.75	489.90	489.50	490.45	493.43	495.31	495.57	495.83	495.95	496.75	496.88
28	492.90	491.70	490.45	489.10	490.25	493.55	495.27	495.70	495.77	495.90	496.83	496.87
29	492.80	.....	490.25	489.35	490.85	493.75	495.27	495.77	495.75	495.87	496.80	496.90
30	492.80	.....	490.00	489.40	490.88	493.83	495.32	495.67	495.72	495.98	496.73	496.83
31	492.85	.....	489.95	.....	491.23	.....	495.37	495.68	.....	496.08	.....	496.85

TABLE 34—Continued

WATER LEVELS—RAINY RIVER—FORT FRANCES, ONTARIO, LOWER (M. & O.) GAUGE

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. Datum]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1915												
1	466.70	465.30	463.90	464.08	464.30	463.50	468.55	465.35	464.32	464.70	463.72	466.02
2	466.70	465.75	464.70	464.00	464.18	463.88	467.95	464.53	464.27	464.55	464.15	466.23
3	465.40	465.60	464.88	464.18	464.18	463.90	467.16	465.32	464 60	463.63	464.32	466.42
4	465.10	465.45	464.78	463.48	464.45	463.95	466.58	465.47	464.90	463.57	464.70	466.38
5	466.35	465.50	464.75	463.68	464.60	463.90	465.60	465.50	463.35	464.52	464.37	464.88
6	466.40	465.40	464.68	464.33	464.48	464.13	465.97	465.40	461.97	464.63	464.35	464.68
7	466.40	464.75	463.50	464.25	464.58	464.23	466.55	465.33	463.27	464.67	463.27	465.72
8	466.40	464.45	463.85	464.38	463.95	464.35	466.38	465.13	464.40	464.80	463.60	465.77
9	466.45	465.35	464.60	464.43	463.60	464.58	466.20	465.22	464.50	464.80	464.28	465.72
10	465.33	465.43	464.08	464.45	464.65	464.68	465.82	465.25	464.48	463.70	464.35	465.77
11	464.90	465.43	464.13	463.48	465.45	464.83	465.60	465.30	464.48	464.00	464.48	466.13
12	466.10	465.48	464.30	463.40	465.78	465.13	465.33	465.32	464.22	464.68	464.75	465.43
13	466.30	465.15	464.25	464.20	465.80	465.73	465.62	465.40	463.63	464.60	464.67	465.63
14	466.20	464.98	463.25	464.55	465.75	467.50	465.48	465.37	464.27	464.28	463.28	466.73
15	466.00	464.55	463.65	464.73	465.10	468.55	465.48	465.12	464.48	464.28	463.98	467.00
16	466.00	465.10	464.10	464.78	464.78	468.70	465.32	464.77	464.45	463.78	463.95	467.02
17	465.83	465.15	464.00	464.83	465.23	468.83	465.07	464.80	464.42	463.13	463.88	466.55
18	465.30	465.00	463.78	463.63	466.00	469.05	465.25	464.87	464.65	463.18	464.30	466.58
19	466.00	465.10	464.23	463.43	466.88	468.85	464.60	464 90	463.23	463.80	464.38	466.18
20	466.00	465.05	464.20	464.48	467.15	468.15	465.27	464.87	464.15	463.97	464.22	465.83
21	466.15	464.60	463.40	464.65	466.98	467.45	465.23	464.85	464.62	464.10	463.27	466.37
22	466.30	463.50	463.43	464.70	465.93	466.95	465.12	464.50	464.48	464.20	463.97	466.48
23	466.30	464.73	463.98	464.70	465.33	466.38	464.77	464.72	464.35	463.70	464.62	466.30
24	466.20	464.75	463.98	464.13	464.70	466.25	464.85	464.80	464.80	463.18	464.68	466.32
25	466.15	464.65	464.33	463.13	464.70	466.18	465.03	464.75	464.92	463.73	464.62	464.55
26	466.50	464.63	464.75	464.03	464.95	466.10	465.22	464.77	463.50	464.17	464.68	463.27
27	466.40	464.70	464.53	464.43	464.65	466.38	465.32	464.80	463.78	464.20	464.68	465.20
28	466.40	464.40	463.90	465.00	464.70	467.38	465.57	464.80	464.33	464.30	464.20	466.42
29	466.40	.....	463.00	464.90	463.80	468.25	465.52	464.33	464.48	464.33	464.08	466.47
30	466.50	.....	464.18	464.90	463.50	468.88	465.68	464.13	464.72	464.32	465.68	466.48
31	466.00	.....	464.18	.....	463.18	.....	465.68	464.33	.....	463.10	.....	466.52

TABLE 35—Continued

WATER LEVELS—RAINY RIVER—INTERNATIONAL FALLS, MINN., U. S. G. S. GAUGE ON DOCK

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. datum]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1915												
1	466.60	465.20	463.80	463.98	464.20	463.40	468.50	465.27	464.15	464.60	463.58	465.88
2	466.60	465.65	464.60	463.90	464.08	463.78	467.88	464.45	464.13	464.47	464.05	466.13
3	465.30	465.50	464.78	464.08	464.08	463.80	467.07	465.23	464.45	463.53	464.20	466.35
4	465.00	465.35	464.68	463.38	464.35	463.85	466.48	465.42	464.77	463.47	464.60	466.25
5	466.25	465.40	464.65	463.58	464.50	463.80	465.48	465.45	463.23	464.40	464.27	464.75
6	466.30	465.30	464.58	464.23	464.38	464.03	465.83	465.27	461.27	464.48	464.25	464.56
7	466.30	464.65	463.40	464.15	464.48	464.13	466.42	465.18	463.18	464.53	463.17	465.60
8	466.30	464.35	463.75	464.28	463.85	464.25	466.27	465.02	464.28	464.70	463.50	465.63
9	466.35	465.25	464.50	464.33	463.50	464.48	466.00	465.10	464.37	464.72	464.18	465.60
10	465.23	465.28	463.98	464.35	464.55	464.58	465.70	465.15	464.35	463.63	464.25	465.67
11	464.80	465.33	464.03	463.38	465.35	464.73	465.47	465.20	464.37	463.87	464.35	466.06
12	466.00	465.38	464.20	463.35	465.68	465.03	465.20	465.17	464.10	464.57	464.60	465.29
13	466.20	465.05	464.15	464.10	465.70	465.63	465.50	465.27	463.57	464.43	464.55	465.51
14	466.10	464.88	463.15	464.45	465.65	467.43	465.35	465.30	464.17	464.15	463.18	466.66
15	465.90	464.45	463.55	464.63	465.00	468.48	465.40	465.03	464.35	464.15	463.77	466.90
16	465.90	465.00	464.00	464.68	464.68	468.63	465.25	464.63	464.32	463.72	463.80	466.85
17	465.75	465.05	463.90	464.73	465.13	468.78	464.95	464.70	464.30	463.03	463.73	466.47
18	465.20	464.90	463.68	463.53	465.90	468.95	465.13	464.75	464.52	463.07	464.18	466.50
19	465.90	465.00	464.13	463.33	466.78	468.80	464.52	464.75	463.13	463.68	464.25	466.05
20	465.90	464.95	464.10	464.38	467.05	468.10	465.13	464.72	464.02	463.85	464.12	465.71
21	466.05	464.50	463.30	464.55	466.88	467.35	465.08	464.75	464.48	463.97	463.15	466.27
22	466.20	463.40	463.33	464.60	465.83	466.88	465.02	464.40	464.35	464.07	463.87	466.39
23	466.20	464.63	463.88	464.60	465.23	466.28	464.67	464.63	464.23	463.63	464.50	466.16
24	466.10	464.65	463.88	464.03	464.60	466.15	464.70	464.75	464.65	463.07	464.57	466.21
25	466.05	464.55	464.23	463.03	464.60	466.08	464.92	464.63	464.80	463.60	464.55	464.44
26	466.40	464.53	464.65	463.93	464.85	466.00	465.08	464.60	463.40	464.05	464.55	463.13
27	466.30	464.60	464.43	464.33	464.55	466.30	465.23	464.65	463.63	464.08	464.57	465.10
28	466.30	464.30	463.80	464.90	464.60	467.28	465.42	464.67	464.23	464.15	464.15	466.32
29	466.30	.....	462.90	464.80	463.70	468.15	465.40	464.27	464.40	464.18	464.05	466.35
30	466.40	.....	464.08	464.80	463.40	468.80	465.53	463.97	464.63	464.17	465.55	466.35
31	465.90	.....	464.08	.....	463.08	.....	465.55	464.20	.....	463.03	.....	466.40

TABLE 36—Continued

WATER LEVELS—RAINY RIVER—INTERNATIONAL FALLS, MINN.

RECORDS OF MINNESOTA & ONTARIO POWER CO. REFERRED TO PUBLIC WORKS (CANADA) DATUM

1915	JANUARY			FEBRUARY			MARCH			APRIL		
	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water	Foot-note	Head Water	Tail Water
1		494.15	466.70		492.72	465.10		491.62	463.55		489.77	464.20
2		494.15	466.60		492.78	465.85		491.50	464.65		489.88	464.00
3					492.80	465.95		491.40	464.90		489.75	464.15
4		494.00	465.50		492.70	465.90		491.38	464.80			
5		494.00	466.40		492.60	465.45		491.33	464.80		489.83	463.18
6		493.85	466.30		492.65	465.60		491.29	464.72		489.40	464.40
7		493.88	466.40								489.60	464.29
8		493.90	466.50		492.58	464.10		491.42	463.20		489.82	464.40
9		493.85	466.55		492.57	465.35		491.04	464.65		489.79	464.45
10					492.50	465.50		491.08	464.75		489.20	464.55
11		493.70	465.08		492.40	465.50		491.05	464.20			
12		493.75	466.00		492.30	465.25		490.85	464.35		489.90	463.00
13		493.60	466.20		492.28	465.40		490.80	464.40		489.50	464.20
14		493.45	466.10								489.05	464.60
15		493.50	466.10		492.42	463.82		490.90	462.91		489.00	464.78
16		493.45	466.00		492.25	464.95		490.70	464.08		489.00	464.85
17					492.20	465.40		490.80	464.08		489.10	465.00
18		493.65	464.80		492.20	465.05		490.80	463.78			
19		493.35	466.05		492.08	465.20		490.50	464.30		489.68	463.75
20		493.25	466.00		492.00	465.02		490.49	464.39		489.20	464.50
21		493.20	466.30								489.20	464.70
22		493.22	466.40		492.10	463.30		490.71	463.00		489.22	464.70
23		493.22	466.45		491.90	464.75		490.37	464.10		489.18	464.72
24					491.86	464.85		490.30	464.10		490.41	463.50
25		493.18	465.85		491.82	464.80		490.26	464.12			
26		493.16	466.60		491.78	464.65		489.80	464.18		489.50	464.10
27		492.90	466.60		491.76	464.78		490.00	464.50		489.52	464.65
28		492.86	466.65								489.12	465.00
29		492.92	466.30					490.43	463.00		489.41	464.90
30		492.70	466.65					489.88	464.20		489.55	464.90
31								489.78	464.05			

1915	MAY			JUNE			JULY			AUGUST		
1	1	490.00	464.40	2	491.07	463.45	3	493.92	468.70	4		
2					491.05	463.90		493.93	468.00		495.42	464.70
3		489.90	464.15		491.08	463.98		494.10	467.32		495.30	465.20
4		489.69	464.50		491.10	464.00					495.31	465.45
5		489.69	464.60		491.05	463.95					495.30	465.50
6		489.75	464.50					494.15	465.75		495.40	465.40
7		489.77	464.62		491.15	464.20		494.15	466.55		495.40	465.30
8		489.80	464.01		491.31	464.30		494.20	466.45			
9					491.13	464.52		494.30	466.10		495.40	465.25
10		489.88	464.90		491.30	464.60		494.40	465.95		495.45	465.35
11		489.90	465.40		491.32	464.82					495.50	465.35
12		489.68	464.83		491.50	465.00		494.80	464.90		495.40	465.40
13		489.80	464.87					494.50	465.55		495.40	465.30
14		489.73	465.80		491.70	467.23		494.62	465.55		495.45	465.40
15		490.43	465.20		492.00	468.50		494.65	465.55			
16					492.20	468.70		494.65	465.40		495.50	464.80
17		490.50	465.15		492.30	468.85		494.75	465.20		495.60	464.80
18		489.70	465.50		492.45	468.95					495.60	464.80
19		490.30	466.80		492.50	468.80		494.83	464.00		495.58	464.90
20		490.13	467.20					494.85	465.20		495.59	464.85
21		490.20	467.00		492.63	467.45		494.90	465.25		495.60	464.75
22		490.50	466.50		492.70	467.05		494.90	466.18			
23					492.80	466.58		495.25	464.87		495.50	464.55
24		491.10	464.88		492.91	466.28		495.20	464.85		495.55	464.85
25		490.63	464.75		493.02	466.16					495.53	464.80
26		490.80	465.10		493.20	466.10		495.19	465.10		495.60	464.80
27		490.90	464.60					495.30	465.30		495.60	464.84
28		490.79	464.80		493.40	467.20		495.18	465.50		495.60	464.80
29		491.30	463.90		493.61	468.05		495.18	465.55			
30					493.75	468.85		495.20	465.63		495.68	463.90
31		491.22	463.40					495.25	465.58		495.60	464.32

1. Average waste for May, 5.12 c. f. s. 2. Average waste for June, 0.39 c. f. s. 3. Average waste for July, 13.63 c. f. s. 4. Average waste for August, 3.40 c. f. s.

TABLE 36—Continued

WATER LEVELS—RAINY RIVER—INTERNATIONAL FALLS, MINN.

RECORDS OF MINNESOTA & ONTARIO POWER CO. REFERRED TO PUBLIC WORKS (CANADA) DATUM

1915	September			October			November			December		
	Footnote	Head Water	Tail Water	Footnote	Head Water	Tail Water	Footnote	Head Water	Tail Water	Footnote	Head Water	Tail Water
1	1	495.63	464.30	....	495.70	464.80	....	495.90	464.10	....	496.65	466.00
2	....	495.70	464.30	....	495.68	464.65	....	495.90	464.15	....	496.78	466.20
3	....	495.60	464.60	....	.....	.....	....	496.00	464.25	....	496.70	466.40
4	....	495.60	464.78	....	495.78	463.97	....	495.90	464.70	....	496.70	466.40
5	....	.....	.....	....	495.60	464.50	....	496.00	464.40	....	.....	.....
6	....	.....	.....	....	495.70	464.60	....	496.00	464.35	....	496.80	465.00
7	....	495.69	463.70	....	495.60	464.65	....	.....	.....	....	496.73	465.70
8	....	495.68	464.30	....	495.60	464.80	....	495.90	464.05	....	496.70	465.80
9	....	495.65	464.50	....	495.60	464.82	....	496.20	464.25	....	496.80	465.70
10	....	495.50	464.50	....	.....	.....	....	496.28	464.35	....	496.80	465.80
11	....	495.60	464.40	....	495.60	464.17	....	496.10	464.45	....	496.80	466.20
12	....	.....	.....	....	495.60	464.70	....	496.10	464.70	....	.....	.....
13	....	495.75	463.19	....	495.60	464.70	....	496.30	464.70	....	496.75	465.00
14	....	495.62	464.25	....	495.70	464.30	....	.....	.....	....	496.78	466.70
15	....	495.70	464.40	....	495.70	464.35	....	496.40	464.10	....	496.80	467.00
16	....	495.60	464.50	....	495.70	463.80	....	496.52	464.00	....	496.78	466.30
17	....	495.63	464.38	....	.....	.....	....	496.54	463.90	....	496.80	466.60
18	....	495.53	464.60	....	495.70	463.50	....	496.50	464.38	....	496.70	466.50
19	....	.....	.....	....	495.75	463.80	....	496.50	464.40	....	.....	.....
20	....	495.50	464.10	....	495.70	464.10	....	496.60	464.30	....	496.80	466.00
21	....	495.60	464.60	....	495.69	464.10	....	.....	.....	....	496.75	466.60
22	....	495.60	464.50	....	495.82	464.25	....	496.60	464.30	....	496.80	466.50
23	....	495.57	464.40	....	495.90	463.70	....	496.60	464.60	....	496.70	466.30
24	....	495.50	464.80	....	.....	.....	....	496.60	464.70	....	496.78	466.40
25	....	495.68	465.00	....	495.60	464.10	....	496.70	464.70	....	496.75	465.50
26	....	.....	.....	....	495.80	464.20	....	496.70	464.70	....	497.00	463.25
27	....	495.80	463.90	....	495.90	464.25	....	496.70	464.70	....	496.90	464.55
28	....	495.75	464.30	....	495.80	464.30	....	.....	.....	....	496.85	466.50
29	....	495.70	464.50	....	495.85	464.30	....	496.70	464.30	....	496.80	466.50
30	....	495.70	464.75	....	495.93	464.30	....	496.68	465.60	....	496.80	466.40
31	....	.....	.....	....	.....	.....	....	.....	.....	....	496.75	466.60

1. Average waste for September, 7.22 c. f. s.

TABLE 40—Continued

WATER LEVELS—RAINY RIVER—LITTLE FORKS, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. Datum.]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1915												
1	466.50	465.70	463.50	463.10	464.00	463.20	468.50	463.50	462.70	463.10	462.20	465.20
2	466.70	465.70	463.70	463.10	463.70	463.50	468.00	463.20	462.70	463.00	462.70	465.30
3	464.10	465.70	464.50	463.30	463.80	463.40	467.40	463.80	463.00	462.40	462.70	465.45
4	465.50	465.70	464.20	462.30	464.00	463.20	466.50	463.90	463.00	463.00	463.10	465.20
5	465.80	465.80	464.30	462.80	464.00	463.30	465.10	463.90	461.90	463.10	462.90	463.45
6	465.90	465.20	464.00	463.20	464.00	463.50	465.50	463.80	460.60	463.20	462.80	464.00
7	465.70	464.60	462.90	463.30	464.40	463.70	466.20	463.70	462.10	463.30	461.90	464.40
8	466.10	464.80	463.20	463.50	463.70	464.00	465.40	463.60	462.90	463.30	462.40	464.50
9	466.20	465.20	463.80	463.70	463.60	464.00	465.20	463.70	462.90	463.40	462.70	464.50
10	464.90	465.00	463.30	463.70	464.60	464.00	464.80	463.90	463.00	461.90	.....	464.80
11	464.80	465.10	463.20	463.00	464.80	464.20	464.60	463.80	463.10	461.80	.....	465.00
12	465.50	465.10	463.40	463.10	465.60	465.00	464.20	463.70	462.60	463.20	.....	464.10
13	465.80	465.00	463.50	463.00	465.60	465.40	464.50	463.50	462.30	463.00	.....	465.10
14	465.70	464.70	462.40	463.80	465.20	467.90	464.30	463.40	462.70	462.90	.....	465.60
15	465.50	463.70	462.70	463.70	464.60	468.40	464.40	463.20	462.80	462.80	.....	465.85
16	465.50	464.70	463.20	464.20	464.50	468.50	464.20	463.20	462.90	462.90	462.60	465.90
17	464.50	464.80	463.10	464.20	465.40	468.60	463.90	463.30	462.90	461.80	462.50	465.50
18	465.50	464.50	462.90	463.00	466.30	468.80	464.00	463.30	462.90	462.10	462.85	465.65
19	465.50	464.55	463.50	463.00	467.20	468.20	463.80	463.30	462.60	462.40	462.20	464.75
20	465.70	464.50	462.50	464.00	467.10	467.80	464.10	463.20	462.90	462.40	462.90	.....
21	465.90	464.10	462.50	464.00	466.10	467.20	463.80	463.20	462.70	462.70	462.00	465.65
22	466.20	463.30	462.90	463.00	465.80	466.40	463.90	463.00	462.90	462.80	463.00	465.35
23	466.50	464.00	463.00	462.70	465.30	465.80	463.50	463.30	463.20	462.70	463.35	465.30
24	465.70	464.20	463.20	.....	464.30	465.40	463.20	463.30	463.30	461.60	463.40	465.20
25	465.50	464.00	463.60	.....	464.20	465.50	462.90	463.20	463.20	462.50	463.40	462.90
26	466.30	464.20	464.00	464.00	464.40	465.40	463.80	463.20	461.80	462.80	463.35	462.40
27	466.20	464.20	463.60	464.50	464.30	466.20	464.00	463.20	462.80	462.80	463.35	464.60
28	466.00	463.70	463.00	464.20	464.30	467.20	464.10	463.00	462.80	462.80	462.70	465.60
29	466.00	.....	463.70	464.20	463.30	468.00	464.20	462.70	463.00	462.70	463.60	465.50
30	466.10	.....	463.30	464.30	463.30	468.80	464.20	462.70	463.10	462.70	464.80	465.45
31	466.20	.....	463.20	.....	462.50	.....	464.00	463.00	.....	461.90	.....	465.55

TABLE 41—Continued

WATER LEVELS—RAINY RIVER—BIG FORK, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. Datum]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1915												
1	463.90	462.70	461.00	460.65	461.80	461.10	467.75	462.25	460.85	461.25	460.20	463.50
2	463.90	463.10	462.00	460.50	461.50	461.50	466.80	461.55	460.75	460.55	460.20	463.80
3	463.10	463.20	462.30	460.60	461.45	461.30	466.00	462.00	460.90	460.55	460.90	464.00
4	463.10	463.20	462.20	460.20	461.70	461.20	464.90	462.15	461.25	460.20	461.20	464.00
5	463.80	463.10	462.10	460.25	461.70	461.10	464.40	462.15	460.40	460.95	461.00	463.20
6	464.20	463.20	462.10	460.95	461.80	461.60	464.70	462.15	459.05	461.20	461.00	462.40
7	464.20	462.60	461.20	460.90	462.40	461.70	465.00	461.90	459.50	461.40	460.40	463.10
8	464.10	462.10	460.80	461.10	462.10	462.00	464.70	461.75	460.75	461.70	460.30	463.20
9	464.30	462.90	461.50	461.30	462.00	462.20	464.40	461.80	460.90	461.60	461.00	463.10
10	463.40	463.20	461.00	461.40	462.60	462.40	463.90	461.80	461.00	461.00	461.15	463.35
11	463.20	463.40	461.00	460.80	463.30	462.75	463.50	461.80	460.95	460.80	461.50	463.60
12	463.80	463.60	461.00	460.75	463.80	463.20	463.30	461.80	460.80	461.50	461.80	463.20
13	463.90	463.30	460.90	461.15	463.70	464.80	463.40	461.80	460.10	461.40	461.80	462.90
14	463.90	463.00	460.10	461.50	463.70	467.10	463.20	461.90	460.70	461.20	460.85	463.80
15	463.80	462.20	460.00	461.90	463.80	.....	463.20	461.65	460.85	461.10	460.90	464.10
16	463.80	462.90	460.50	462.05	462.75	.....	463.10	461.30	460.90	460.80	461.00	464.20
17	463.60	462.80	460.50	462.00	463.80	.....	462.80	461.40	460.85	460.30	460.85	464.10
18	463.10	462.80	460.40	461.00	465.05	.....	462.60	461.40	461.10	460.10	461.20	464.00
19	463.70	462.70	460.80	460.95	465.75	467.80	462.35	461.50	460.30	460.60	461.50	463.70
20	463.70	462.30	460.70	461.40	465.75	466.10	462.60	461.45	460.70	460.75	461.40	462.90
21	463.70	462.00	460.50	461.50	465.50	466.10	462.55	461.30	461.00	460.90	461.00	464.00
22	463.80	461.50	459.90	461.55	464.30	465.60	462.40	461.00	460.90	461.00	461.10	463.90
23	463.60	462.00	460.50	461.60	463.90	465.00	462.15	461.20	460.90	460.70	461.90	464.80
24	463.10	462.10	460.60	460.90	463.10	464.70	462.20	461.30	461.20	460.10	462.00	463.80
25	463.10	462.10	460.90	460.40	463.10	464.70	462.30	461.30	461.40	460.40	462.00	462.60
26	463.60	462.00	461.20	461.00	463.05	464.50	462.50	461.30	460.50	461.00	461.90	461.00
27	463.50	462.10	461.10	461.70	462.65	465.60	462.50	461.20	460.15	461.00	461.70	461.60
28	463.40	461.70	459.80	462.25	462.50	466.70	462.60	461.20	460.80	461.00	461.25	463.30
29	463.40	461.70	460.20	462.30	461.70	467.75	462.55	460.90	461.00	461.00	461.00	463.80
30	463.70	.....	460.80	462.20	461.50	468.45	462.60	460.70	461.15	460.90	462.90	463.90
31	463.40	.....	460.70	.....	461.10	.....	462.50	460.90	.....	460.10	.....	464.10

TABLE 42—Continued

WATER LEVELS—RAINY RIVER—EMO, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. Datum]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1915												
1	459.80	458.80	458.80	456.90	458.20	457.20	463.65	458.45	457.20	457.20	456.05	459.20
2	459.80	459.30	459.10	456.80	458.05	457.35	463.10	457.65	457.15	457.25	456.85	459.30
3	459.80	459.30	459.30	456.70	457.75	457.35	462.25	458.00	456.90	457.00	456.95	459.60
4	459.00	459.30	459.40	456.90	457.90	457.30	461.55	458.05	457.25	456.25	457.15	459.70
5	459.70	459.20	459.40	456.40	457.95	457.30	461.20	458.10	456.60	456.90	457.10	459.55
6	459.70	459.20	459.30	457.00	458.05	457.65	461.35	458.10	455.90	457.10	457.00	458.30
7	459.70	459.10	459.10	457.20	458.35	457.80	461.10	457.95	454.95	457.25	456.85	459.05
8	459.70	458.70	458.50	457.20	458.70	458.30	460.85	457.65	456.15	457.60	456.55	459.40
9	459.70	459.00	459.00	457.60	459.05	458.25	460.50	457.80	456.90	457.65	457.05	459.35
10	459.50	459.30	458.50	457.70	458.80	458.45	460.15	457.80	456.95	456.95	457.25	459.25
11	459.00	459.40	458.30	457.40	459.65	458.75	459.65	457.80	456.95	456.50	457.45	459.20
12	459.60	459.40	458.20	456.80	459.90	459.20	459.30	458.30	456.65	457.15	457.80	459.15
13	459.70	459.50	458.20	457.50	460.00	460.70	459.35	458.30	456.10	457.55	457.75	458.95
14	459.70	459.20	457.40	457.00	459.65	462.65	459.35	457.75	456.65	457.25	457.40	459.25
15	459.70	458.60	456.50	458.10	459.35	463.65	459.20	457.70	456.90	457.20	.....	459.25
16	459.50	459.10	457.00	458.40	459.50	463.75	459.10	457.45	456.90	457.05	457.05	459.60
17	459.60	459.40	456.90	458.50	460.05	464.00	459.05	457.45	456.90	456.30	.....	459.65
18	459.20	459.50	456.60	458.10	461.25	464.05	458.80	457.45	457.10	455.90	457.15	459.55
19	459.60	459.50	456.70	457.10	461.80	463.70	458.40	457.40	456.85	456.65	457.40	459.55
20	459.70	459.60	456.90	457.60	461.60	.....	458.80	457.40	456.55	456.90	457.45	459.35
21	459.70	459.60	456.50	457.80	461.60	462.65	458.60	457.35	457.00	457.00	456.85	459.55
22	459.60	459.20	456.00	457.90	460.50	461.60	458.50	457.15	457.00	457.05	.....	459.65
23	459.60	459.60	456.60	457.80	460.30	461.10	458.30	457.20	457.05	456.80	458.30	459.65
24	459.50	459.60	456.70	457.70	459.65	460.80	458.15	457.25	457.20	456.65	459.20	459.55
25	459.10	459.70	456.90	457.60	459.30	460.75	458.45	457.30	457.25	456.20	459.25	459.45
26	459.30	459.60	457.40	457.10	459.25	460.65	458.50	457.30	456.95	456.95	459.15	459.10
27	459.40	459.60	457.20	458.20	458.80	461.55	.....	457.30	456.60	457.00	459.10	458.95
28	459.40	459.40	457.10	458.40	458.80	462.80	458.50	457.30	457.00	457.10	457.95	459.70
29	459.40	.....	456.70	458.50	458.10	463.40	458.55	457.20	457.05	457.15	457.60	459.80
30	459.40	.....	457.20	458.50	457.95	464.25	458.60	456.90	457.15	457.10	458.45	459.80
31	459.30	.....	457.00	.....	457.35	.....	458.50	457.15	.....	456.65	.....	459.85

TABLE 44—Continued

WATER LEVELS—RAINY RIVER—BIRCHDALE, MINN.

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. Datum]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1915												
1...	455.40	454.10	452.40	452.10	453.40	452.30	457.90	453.60	452.20	452.60	451.30	452.10
2...	455.50	454.40	452.70	452.00	452.90	452.60	457.40	452.80	452.20	452.50	452.00	453.50
3...	455.10	454.50	453.10	452.00	452 90	452.70	456.70	453.10	452.20	452.40	452.20	453.70
4...	454.70	454.50	453.50	452.30	453.00	452.60	456.20	453.30	452.40	451.60	452.40	454.10
5...	455.10	454.30	453.80	451.50	453.10	452.60	455.70	453.30	452.50	452.10	452.30	454.70
6...	455.20	454.40	453.80	452.20	453.20	452.60	455.30	453.20	451.20	452.40	452.30	454.50
7...	455.20	454.40	453.40	452.40	453.50	452.90	455.70	453.10	450.50	452.60	452.20	454.50
8...	455.30	453.50	452.50	452.30	453.90	453.20	455.60	453.00	451.80	452.70	451.60	454.60
9...	455.40	453.40	453.20	452.50	453.40	453.30	455.20	453.00	452.20	452.80	452.10	454.70
10...	455.30	453.40	453.30	452.70	453.50	453.50	454.90	453.00	452.20	452.80	452.40	454.70
11...	454.20	453.50	453.20	452.60	454.40	453.80	454.60	453.00	452.30	451.80	452.60	454.70
12...	454.80	453.60	453.20	451.80	454.60	454.20	454.40	453.00	452.20	452.50	452.80	454.60
13...	455.00	453.50	453.20	452.40	454.80	455.50	454.40	453.00	451.60	452.70	452.90	454.50
14...	455.00	453.50	452.60	452.70	454.70	456.90	454.40	453.00	451.90	452.50	452.20	454.50
15...	455.00	453.20	450.40	453.10	454.50	457.50	454.30	453.10	452.10	452.40	452.00	454.40
16...	455.00	453.50	451.80	453.30	453.90	457.80	454.20	452.70	452.20	452.30	452.30	454.50
17...	455.20	453.80	452.00	453.30	454.60	457.90	454.10	452.60	452.20	452.20	452.20	454.80
18...	454.80	453.70	451.80	453.10	455.60	458.00	453.90	452.70	452.30	451.30	452.30	455.00
19...	454.90	453.80	451.90	452.10	456.40	457.70	453.90	452.60	452.40	451.90	452.50	455.00
20...	455.10	453.80	452.10	452.60	456.50	457.10	453.70	452.70	451.90	452.20	452.60	454.30
21...	455.10	453.70	452.00	452.80	456.30	456.40	453.80	452.70	452.20	452.10	452.40	454.70
22...	455.20	452.90	451.30	452.90	455.70	456.00	453.60	452.60	452.20	452.30	453.30	455.20
23...	455.20	453.00	451.80	452.90	454.70	455.60	453.50	452.50	452.20	452.20	455.10	455.00
24...	455.00	453.00	451.90	452.90	454.60	455.40	453.40	452.60	452.40	452.00	455.90	455.10
25...	454.70	453.10	452.00	452.20	454.00	455.30	453.60	452.60	452.60	451.30	455.00	455.00
26...	455.00	453.10	452.40	452.10	454.20	455.50	453.60	452.60	452.60	452.10	454.90	453.10
27...	455.10	453.00	452.70	453.00	453.90	456.10	453.70	452.60	451.50	452.30	454.90	452.30
28...	455.00	453.00	452.00	453.20	453.80	456.90	453.70	452.60	452.00	452.30	454.70	454.00
29...	454.80	.....	451.60	453.60	453.60	457.70	453.70	452.40	452.30	452.30	454.00	454.90
30...	455.00	.....	452.10	453.60	453.80	458.20	453.60	452.10	452.50	452.30	451.60	455.10
31...	455.00	.....	452.20	.....	453.80	.....	453.60	452.20	.....	452.30	.....	455.20

TABLE 46—Continued

WATER LEVELS—RAINY RIVER—BOUCHERVILLE, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. Datum]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1915												
1...	448.85	449.10	448.95	449.15	449.00	449.10	453.10	449.90	448.60	448.40	448.60	448.50
2...	449.35	449.10	449.00	449.05	449.00	449.10	452.40	449.80	448.40	448.20	448.20	448.60
3...	449.20	449.20	449.10	448.95	449.10	449.05	451.95	449.65	448.60	448.20	447.90	448.65
4...	449.00	449.25	449.15	448.90	449.05	448.70	451.95	449.60	448.60	448.55	448.35	448.70
5...	449.15	449.30	449.20	448.85	449.40	449.30	451.15	449.40	448.50	448.75	447.90	448.75
6...	449.30	449.35	449.25	449.00	449.10	449.20	450.95	449.60	448.30	449.10	448.25	448.70
7...	449.20	449.25	449.25	449.00	449.90	449.40	451.10	449.50	448.10	449.50	448.00	448.60
8...	449.15	448.85	449.15	449.00	449.80	449.10	450.65	449.40	448.60	449.40	450.00	448.75
9...	449.15	449.00	449.10	449.15	449.50	449.40	450.60	449.20	448.70	448.70	448.20	448.80
10...	449.10	449.20	449.10	449.15	449.20	449.35	450.50	449.30	448.80	448.55	448.75	448.85
11...	449.10	449.25	449.10	449.20	449.95	449.40	450.55	449.20	448.50	448.50	448.80	448.80
12...	449.10	449.25	449.20	448.95	449.95	450.60	450.30	449.20	448.30	448.55	448.80	448.80
13...	449.20	449.25	449.15	448.80	449.95	450.75	450.40	449.40	448.30	448.45	448.40	448.45
14...	449.45	449.30	449.15	448.80	449.90	450.70	450.45	449.30	448.60	448.35	448.80	448.60
15...	449.40	449.00	448.85	449.10	450.00	451.75	450.30	449.20	448.00	448.35	448.40	448.50
16...	449.45	449.15	449.00	449.05	450.00	.....	450.55	449.00	448.60	448.30	447.90	448.85
17...	449.40	449.25	449.10	449.00	450.20	452.00	450.30	448.90	448.15	448.30	447.80	448.95
18...	449.20	449.25	449.15	449.10	450.60	452.25	450.10	448.80	448.65	448.20	448.60	448.85
19...	449.30	449.25	449.20	449.00	450.75	452.25	450.10	448.85	448.15	448.05	449.00	448.90
20...	449.40	449.30	449.25	448.75	450.75	451.70	450.15	448.90	449.20	448.10	448.50	448.55
21...	449.40	449.30	449.20	449.00	450.75	451.60	450.10	448.90	448.45	448.15	449.10	448.70
22...	449.35	449.05	448.90	449.05	450.75	451.10	450.00	448.80	448.10	448.20	448.20	448.85
23...	449.30	449.15	449.10	449.05	450.20	450.85	450.05	448.70	448.60	448.30	448.30	448.80
24...	449.20	449.20	449.15	449.05	450.00	450.60	449.50	448.80	448.60	448.40	448.50	448.80
25...	449.20	449.25	449.20	448.80	450.00	450.60	449.90	448.90	448.60	449.00	448.65	448.80
26...	449.25	449.15	449.20	449.00	449.65	450.45	449.90	448.70	448.50	448.60	448.70	448.25
27...	449.30	449.15	449.30	449.00	449.65	451.45	449.95	448.70	447.80	448.40	448.50	448.15
28...	449.30	449.10	448.85	449.80	449.60	.....	449.85	448.50	448.10	448.50	448.35	448.45
29...	449.30	.....	448.90	449.60	449.00	.....	449.90	448.60	448.30	448.50	448.20	448.85
30...	449.35	.....	449.20	449.30	449.00	453.00	449.90	448.60	448.35	448.00	448.30	448.85
31...	449.25	.....	449.25	.....	449.00	.....	449.80	448.70	.....	448.60	.....	448.95

TABLE 45—Continued

WATER LEVELS—RAINY RIVER—BIRCHDALE, MINN., LOWER GAUGE—LONG SAULT RAPIDS

RECORDS OF INTERNATIONAL JOINT COMMISSION

[Referred to Dept. Public Works (Canada) Datum]

1915	January		February		March		April		May		June	
	Gauge Height	D.P.W. Datum	Gauge Height	D.P.W. Datum	Gauge Height	D.P.W. Datum	Gauge Height	D.P.W. Datum	Gauge Height	D.P.W. Datum	Gauge Height	D.P.W. Datum
1	7.4	451.4	6.8	450.8	7.05	451.05	6.0	450.0	5.8	449.8	5.5	449.5
2	7.4	451.4	6.85	450.85	7.0	451.0	6.1	450.1	5.3	449.3	5.45	449.45
3	7.4	451.4	6.9	450.9	6.9	450.9	6.15	450.15	5.55	449.55	5.4	449.4
4	7.3	451.3	6.95	450.95	6.95	450.95	6.0	450.0	5.55	449.55	5.35	449.35
5	7.25	451.25	6.95	450.95	7.0	451.0	5.8	449.8	5.5	449.5	5.3	449.3
6	7.3	451.3	7.0	451.0	7.1	451.1	5.6	449.6	5.6	449.6	5.7	449.7
7	7.3	451.3	7.0	451.0	7.0	451.0	5.4	449.4	5.6	449.6	5.5	449.5
8	7.25	451.25	6.95	450.95	6.95	450.95	5.3	449.3	5.9	449.9	5.8	449.8
9	7.2	451.2	6.9	450.9	6.9	450.9	5.4	449.4	5.8	449.8	5.9	449.9
10	7.2	451.2	6.85	450.85	6.95	450.95	5.45	449.45	5.6	449.6	5.95	449.95
11	7.1	451.1	6.9	450.9	7.1	451.1	5.6	449.6	6.0	450.0	6.0	450.0
12	7.0	451.0	6.95	450.95	7.15	451.15	5.1	449.1	6.4	450.4	5.8	449.8
13	6.95	450.95	7.0	451.0	7.15	451.15	5.15	449.15	6.3	450.3	6.8	450.8
14	7.0	451.0	6.95	450.95	7.15	451.15	5.2	449.2	6.2	450.2	6.9	450.9
15	7.1	451.1	6.9	450.9	7.1	451.1	5.4	449.4	6.2	450.2	8.2	452.2
16	7.15	451.15	6.8	450.8	6.95	450.95	5.4	449.4	6.3	450.3	8.3	452.3
17	7.1	451.1	6.8	450.8	7.1	451.1	5.4	449.4	6.6	450.6	8.3	452.3
18	7.0	451.0	6.85	450.85	7.15	451.15	5.5	449.5	6.65	450.65	8.2	452.2
19	7.0	451.0	6.85	450.85	7.2	451.2	5.3	449.3	7.1	451.1	8.1	452.1
20	6.9	450.9	6.9	450.9	7.1	451.1	5.15	449.15	7.3	451.3	8.0	452.0
21	6.9	450.9	6.9	450.9	7.0	451.0	5.1	449.1	7.3	451.3	7.9	451.9
22	6.95	450.95	6.8	450.8	6.9	450.9	5.3	449.3	7.0	451.0	7.7	451.7
23	6.9	450.9	6.8	450.8	6.8	450.8	5.3	449.3	7.0	451.0	7.4	451.4
24	6.95	450.95	6.85	450.85	6.7	450.7	5.4	449.4	6.6	450.6	7.2	451.2
25	7.0	451.0	6.9	450.9	6.6	450.6	5.3	449.3	6.2	450.2	7.0	451.0
26	7.0	451.0	6.95	450.95	6.5	450.5	5.35	449.35	6.1	450.1	6.8	450.8
27	6.95	450.95	7.0	451.0	6.4	450.4	5.4	449.4	6.0	450.0	7.8	451.8
28	6.9	450.9	7.1	451.1	6.3	450.3	6.2	450.2	5.9	449.9	8.3	452.3
29	6.85	450.85	.....	.....	6.2	450.2	5.11	449.11	5.8	449.8	9.0	453.0
30	6.9	450.9	.....	.....	6.1	450.1	5.10	449.10	5.7	449.7	9.3	453.3
31	6.85	450.85	.....	.....	6.0	450.0	.....	.....	5.6	449.6	.....	.....

1915	July		August		September		October		November		December	
1	9.4	453.4	6.1	450.1	5.0	449.0	4.7	448.7	4.6	448.6	4.7	448.7
2	9.0	453.0	5.9	449.9	4.9	448.9	4.9	448.9	4.65	448.65	4.7	448.7
3	8.7	452.7	5.85	449.85	4.8	448.8	4.9	448.9	4.5	448.5	4.65	448.65
4	8.3	452.3	5.8	449.8	4.9	448.9	4.7	448.7	4.55	448.55	4.6	448.6
5	8.0	452.0	5.9	449.9	4.8	448.8	4.4	448.4	4.5	448.5	4.6	448.6
6	7.3	451.3	6.0	450.0	4.7	448.7	4.5	448.5	4.5	448.5	4.5	448.5
7	7.45	451.45	5.9	449.9	4.5	448.5	4.6	448.6	4.5	448.5	4.4	448.4
8	7.4	451.4	5.8	449.8	4.65	448.65	4.7	448.7	4.4	448.4	4.4	448.4
9	7.3	451.3	5.7	449.7	4.75	448.75	4.8	448.8	4.5	448.5	4.5	448.5
10	7.15	451.15	5.5	449.5	4.9	448.9	4.8	448.8	4.75	448.75	4.55	448.55
11	7.0	451.0	5.7	449.7	5.0	449.0	4.7	448.7	4.9	448.9	4.6	448.6
12	6.8	450.8	5.55	449.55	4.9	448.9	4.6	448.6	5.1	449.1	4.6	448.6
13	6.7	450.7	5.5	449.5	4.8	448.8	4.65	448.65	5.3	449.3	4.5	448.5
14	6.75	450.75	5.55	449.55	4.7	448.7	4.7	448.7	5.35	449.35	4.55	448.55
15	6.6	450.6	5.6	449.6	4.65	448.65	4.8	448.8	5.4	449.4	4.6	448.6
16	6.7	450.7	5.6	449.6	4.7	448.7	4.9	448.9	5.3	449.3	4.6	448.6
17	6.6	450.6	5.2	449.2	4.8	448.8	4.6	448.6	5.2	449.2	4.65	448.65
18	6.4	450.4	5.25	449.25	5.2	449.2	4.8	448.8	5.1	449.1	4.65	448.65
19	6.4	450.4	5.3	449.3	5.7	449.7	4.8	448.8	5.0	449.0	4.6	448.6
20	6.45	450.45	5.3	449.3	6.2	450.2	4.75	448.75	4.8	448.8	4.5	448.5
21	6.3	450.3	5.3	449.3	5.0	449.0	4.6	448.6	4.7	448.7	4.4	448.4
22	6.3	450.3	5.15	449.15	4.5	448.5	4.5	448.5	4.7	448.7	4.45	448.45
23	6.25	450.25	5.1	449.1	4.8	448.8	4.3	448.3	4.8	448.8	4.5	448.5
24	6.2	450.2	5.15	449.15	4.9	448.9	4.2	448.2	4.9	448.9	4.55	448.55
25	6.2	450.2	5.2	449.2	4.95	448.95	4.2	448.2	4.9	448.9	4.55	448.55
26	6.25	450.25	5.0	449.0	4.9	448.9	4.3	448.3	4.85	448.85	4.5	448.5
27	6.2	450.2	5.0	449.0	4.8	448.8	4.35	448.35	4.8	448.8	4.45	448.45
28	6.2	450.2	5.15	449.15	4.7	448.7	4.4	448.4	4.8	448.8	4.4	448.4
29	6.25	450.25	5.0	449.0	4.6	448.6	4.5	448.5	4.75	448.75	4.4	448.4
30	6.3	450.3	4.95	448.95	4.65	448.65	4.6	448.6	4.7	448.7	4.45	448.45
31	6.2	450.2	5.0	449.0	.....	.....	4.6	448.6	.....	.....	4.45	448.45

TABLE 47—Continued

WATER LEVELS—RAINY RIVER—RAINY RIVER, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. Datum.]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1915												
1	448.50	448.50	448.50	448.50	448.80	448.70	450.20	449.25	448.30	448.00	448.20	447.20
2	448.50	448.50	448.50	448.50	448.65	448.80	450.00	449.10	448.00	448.10	447.85	447.20
4	448.50	448.50	448.50	448.50	448.65	448.70	449.90	449.10	448.25	448.20	447.60	447.20
4	448.50	448.50	448.50	448.50	448.60	448.60	450.10	449.10	448.15	448.50	447.80	447.20
5	448.50	448.50	448.50	448.50	448.80	448.60	449.80	449.00	448.00	447.80	447.40	447.20
6	448.50	448.50	448.50	448.50	448.65	448.90	449.65	449.00	448.00	448.90	447.80	447.30
7	448.50	448.50	448.50	448.50	448.85	448.70	449.65	449.00	447.85	449.00	447.90	447.40
8	448.50	448.50	448.50	448.50	448.95	448.90	449.60	448.95	448.50	448.15	449.10	447.40
9	448.50	448.50	448.50	448.50	448.65	448.55	449.50	448.95	448.10	447.80	447.80	447.60
10	448.50	448.50	448.50	448.50	448.60	448.65	449.40	448.80	448.40	448.05	447.15	447.60
11	448.40	448.50	448.50	448.60	448.80	448.75	449.55	448.70	448.20	448.00	447.70	447.80
12	448.50	448.50	448.50	448.40	448.95	448.75	449.50	448.80	448.00	447.80	447.70	448.00
13	448.50	448.50	448.50	448.40	449.00	448.95	449.50	448.80	448.05	448.00	447.20	448.20
14	448.50	448.50	448.50	448.40	449.00	448.95	449.55	448.80	448.20	447.90	447.30	448.20
15	448.50	448.50	448.50	448.50	448.80	449.30	449.50	448.65	447.65	448.00	447.15	448.20
16	448.50	448.50	448.50	448.50	449.20	449.60	449.50	448.75	448.15	448.00	447.10	448.20
17	448.50	448.50	448.50	448.40	449.25	449.20	449.70	448.65	447.80	448.00	447.10	448.20
18	448.50	448.50	448.50	448.50	449.10	449.60	449.50	448.55	448.20	447.90	447.10	448.00
19	448.50	448.50	448.50	448.40	449.20	449.60	449.50	448.50	447.80	447.80	447.10	448.00
20	448.50	448.50	448.50	448.50	449.10	449.20	449.50	448.50	448.80	447.90	447.40	448.00
21	448.50	448.50	448.50	448.30	449.15	449.70	449.45	448.50	448.00	448.00	447.40	448.00
22	448.50	448.50	448.50	448.50	449.10	449.25	449.35	448.50	447.85	447.90	447.10	448.00
23	448.50	448.50	448.50	448.50	449.00	449.15	449.50	448.95	448.10	447.90	447.10	448.00
24	448.50	448.50	448.50	448.60	449.00	449.10	449.35	448.60	447.90	447.95	447.20	448.00
25	448.50	448.50	448.50	448.50	449.50	449.20	449.30	448.70	448.40	448.35	447.20	448.00
26	448.50	448.50	448.50	448.55	448.85	449.10	449.20	448.30	448.10	448.10	447.20	447.50
27	448.50	448.50	448.50	448.60	448.90	449.50	449.25	448.20	447.80	447.65	447.20	447.75
28	448.50	448.50	448.50	449.00	448.85	449.90	.....	448.70	447.80	448.10	447.20	447.70
29	448.50	.....	448.50	448.85	448.80	450.00	449.15	448.35	447.90	447.95	447.20	447.80
30	448.50	.....	448.50	448.85	448.90	450.10	449.20	448.30	447.90	447.90	447.10	448.00
31	448.50	.....	448.50	.....	448.80	.....	449.10	448.20	.....	448.10	.....	448.00

TABLE 48—Continued

WATER LEVELS—RAINY RIVER—PINEWOOD, ONTARIO

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. Datum]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1915												
1	448.40	448.50	448.40	448.80	449.10	448.90	451.90	449.50	448.40	448.00	448.40	447.95
2	448.40	448.50	448.50	448.80	449.10	448.80	451.70	449.25	448.15	448.20	448.00	448.15
3	448.40	448.50	448.50	448.90	449.10	448.70	451.35	449.30	448.20	448.35	448.60	448.20
4	448.40	448.50	448.50	449.00	449.10	448.60	451.40	449.30	448.30	448.60	448.05	448.25
5	448.50	448.50	448.50	449.00	449.15	448.70	450.70	449.20	448.25	447.90	448.00	448.30
6	448.50	448.50	448.50	448.90	449.20	449.10	450.50	449.25	448.15	449.10	448.10	448.20
7	448.50	448.60	448.50	448.90	449.25	449.15	450.60	449.20	448.00	449.20	447.90	448.10
8	448.60	448.60	448.50	448.90	449.25	449.20	450.50	449.20	448.30	448.30	449.50	448.20
9	448.60	448.60	448.60	448.90	449.30	448.90	450.25	449.10	448.30	447.50	449.10	448.25
10	448.60	448.60	448.60	448.80	449.30	449.10	450.10	449.10	448.60	448.30	448.90	448.15
11	448.60	448.60	448.60	448.80	449.45	449.25	450.15	449.05	448.30	448.10	449.40	448.20
12	448.60	448.60	448.70	448.70	449.55	449.45	450.00	449.00	448.15	448.00	449.40	448.20
13	448.70	448.60	448.70	448.70	449.55	449.75	450.05	448.95	448.15	448.30	449.00	448.30
14	448.70	448.50	448.70	448.80	449.50	450.30	450.05	449.00	448.40	448.05	448.40	448.30
15	448.70	448.50	448.70	448.70	449.40	450.80	450.05	448.90	447.75	448.10	448.20	448.25
16	448.70	448.50	448.70	448.70	449.60	451.20	450.10	448.85	448.25	448.10	448.10	448.25
17	448.70	448.50	448.70	448.70	449.70	451.15	450.00	448.70	448.05	448.10	448.20	448.20
18	448.70	448.50	448.70	448.70	449.75	451.50	449.70	448.75	448.30	447.95	448.60	448.20
19	448.60	448.50	448.60	448.80	450.20	451.35	449.75	448.75	448.40	448.00	448.30	448.25
20	448.60	448.50	448.70	448.80	450.15	450.85	449.75	448.60	448.90	447.90	448.20	448.15
21	448.60	448.50	448.70	448.80	450.15	450.90	449.70	448.65	448.20	448.20	448.20	448.25
22	448.60	448.50	448.70	448.80	449.90	450.50	449.70	448.60	447.90	447.95	448.20	448.35
23	448.60	448.50	448.70	448.80	449.80	450.40	449.75	449.35	448.40	447.90	448.15	448.40
24	448.50	448.50	448.70	448.80	449.60	450.10	449.70	448.65	448.00	448.00	448.20	448.30
25	448.50	448.50	448.80	448.90	449.40	450.15	449.65	448.75	448.70	448.60	448.25	448.25
26	448.50	448.50	448.80	448.90	449.30	450.20	449.60	448.45	448.20	448.30	448.30	448.15
27	448.50	448.50	448.80	448.95	449.20	450.90	449.65	448.40	447.80	448.00	448.35	448.00
28	448.50	448.50	448.80	449.20	449.20	451.25	449.55	449.05	447.90	448.20	448.20	448.10
29	448.50	.....	448.80	449.15	449.10	451.80	449.55	448.60	448.10	448.10	448.10	448.35
30	448.50	.....	448.80	449.10	449.10	452.10	449.55	448.45	448.10	447.80	448.00	448.40
31	448.50	.....	448.80	.....	449.00	.....	449.50	448.25	.....	448.35	.....	448.40

TABLE 51—Continued

WATER LEVELS—LAKE NAMAKAN—KETTLE FALLS

RECORDS OF DEPARTMENT OF PUBLIC WORKS, CANADA

[Elevations refer to D. P. W. Datum]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1915												
1	502.00	501.25	500.70	500.30	498.90	498.30	502.55	506.66	505.05	502.55	500.88	500.09
2	501.95	501.15	500.70	500.30	498.80	498.30	502.65	506.66	504.95	502.50	500.80	500.08
3	501.95	501.20	500.65	500.30	498.70	498.30	502.90	506.66	504.90	502.43	500.70	500.05
4	501.90	501.15	500.60	500.30	498.65	498.30	503.20	506.65	504.80	502.35	500.60	500.04
5	501.85	501.15	500.60	500.35	498.60	498.25	503.45	506.66	504.72	502.30	500.57	500.03
6	501.85	501.10	500.60	500.35	498.52	498.35	503.65	506.66	504.61	502.32	500.54	500.00
7	501.80	501.10	500.65	500.35	498.50	498.30	503.90	506.64	504.51	502.30	500.47	500.02
8	501.80	501.05	500.55	500.35	498.52	498.25	504.15	506.61	504.43	502.25	500.50	500.03
9	501.80	501.00	500.55	500.40	498.48	498.35	504.35	506.61	504.34	502.17	500.47	500.01
10	501.75	501.00	500.50	500.40	498.43	498.35	504.50	506.58	504.25	502.17	500.39	500.00
11	501.75	501.00	500.50	500.45	498.44	498.50	504.65	506.54	504.14	502.10	500.45	499.99
12	501.70	501.00	500.50	500.45	498.42	498.55	504.75	506.48	504.00	502.07	500.45	499.97
13	501.70	500.95	500.50	500.50	498.38	498.85	505.00	506.45	503.92	502.06	500.36	499.96
14	501.65	501.00	500.45	500.50	498.36	499.00	505.10	506.40	503.83	502.05	500.40	499.94
15	501.65	500.95	500.45	500.55	498.30	499.20	505.30	506.40	503.75	502.02	500.38	499.93
16	501.65	500.90	500.45	500.55	498.30	499.45	505.40	506.30	503.64	502.03	500.35	499.90
17	501.60	500.90	500.45	500.40	498.27	499.65	505.45	506.26	503.54	502.02	500.30	499.89
18	501.55	500.90	500.40	500.35	498.30	499.80	505.55	506.22	503.55	502.00	500.30	499.87
19	501.60	500.85	500.40	500.25	498.30	500.00	505.70	506.15	503.46	502.00	500.28	499.85
20	501.55	500.85	500.40	500.10	498.30	500.25	505.80	506.10	503.38	502.02	500.30	499.80
21	501.50	500.85	500.40	500.00	498.30	500.40	505.85	506.00	503.30	501.95	500.35	499.78
22	501.50	500.80	500.40	499.85	498.31	500.65	505.90	505.95	503.20	501.85	500.22	499.76
23	501.50	500.80	500.40	499.70	498.32	500.80	506.05	505.88	503.14	501.75	500.20	499.76
24	501.45	500.80	500.40	499.65	498.32	500.95	506.15	505.75	503.00	501.62	500.20	499.74
25	501.40	500.75	500.35	499.50	498.30	501.10	506.25	505.68	503.00	501.57	500.18	499.71
26	501.40	500.75	500.35	499.40	498.30	501.25	506.35	505.60	502.90	501.49	500.17	499.70
27	501.40	500.70	500.35	499.30	498.27	501.55	506.40	505.51	502.83	501.35	500.15	499.68
28	501.35	500.70	500.35	499.20	498.30	501.80	506.50	505.42	502.75	501.25	500.22	499.65
29	501.30	.....	500.35	499.10	498.29	502.00	506.60	505.34	502.70	501.12	500.12	499.61
30	501.30	.....	500.35	499.00	498.30	502.20	506.65	505.25	502.61	501.02	500.10	499.60
31	501.25	.....	500.30	.....	498.31	.....	506.65	505.15	.....	500.98	.....	499.57

TABLE 53—Continued

DISCHARGE MEASUREMENTS—WINNIPEG RIVER AT NORTH TUNNEL ISLAND STATION

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

Date	Hydrographer	Width Feet	Area Sq. Ft.	Mean Velocity Ft. per Sec.	Water Level Sea-level Datum		Discharge c. f. s.		
					At Bridge	At Meter Section	Tunnel Island	Kenora	Total
1915									
Jan. 7	O'Grady	163	4579	2.02	1037.06	1036.96	9248		
7	do	163	4579	2.05	37.06	36.96	9406	1076	10402
9	do	163	4584	2.04	37.09	36.99	9336		
9	do	163	4584	2.01	37.09	36.99	9235	1020	10306
11	do	163	4557	2.03	36.96	36.82	9248		
11	do	163	4557	2.03	36.96	36.82	9267	1032	10289
14	do	163	4589	2.05	37.11	37.02	9392		
14	do	163	4589	2.03	37.11	37.02	9342	1061	10428
16	do	163	4590	2.05	37.13	37.03	9426		
16	do	163	4590	2.02	37.13	37.03	9261	1030	10374
19	do	163	4581	2.03	37.03	36.97	9319		
19	do	163	4581	2.03	37.03	36.97	9319	1154	10473
22	do	163	4601	2.07	37.14	37.10	9512	1206	10718
25	do	163	4560	1.94	36.93	36.84	8856		
25	do	163	4560	1.99	36.93	36.84	9069	1208	10170
26	do	163	4595	2.04	37.15	37.06	9373	1146	10519
30	do	163	4605	2.08	37.17	37.12	9576	1185	10761
31	Galloway	163	4573	1.82	36.98	36.95	8319		
31	do	163	4573	1.83	36.98	36.92	8388		
31	do	163	4563	1.81	36.92	36.85	8281		
31	do	163	4563	1.83	36.92	36.85	8367		
31	do	163	4557	1.77	36.87	36.82	8055		
31	do	163	4557	1.83	36.87	36.82	8340	730	9022
Feb. 1	O'Grady	163	4555	1.94	36.87	36.81	8838		
1	do	163	4563	2.01	36.92	36.86	9181		
1	do	163	4571	1.98	36.94	36.90	9069		
1	do	163	4573	2.00	36.99	36.92	9159		
1	do	163	4574	2.00	37.01	36.93	9156		
1	do	163	4574	2.04	37.03	36.93	9348	1162	10287
2	Galloway	163	4587	2.04	37.06	37.00	9342		
2	do	163	4587	2.01	37.06	37.00	9211	1180	10457
6	O'Grady	163	4601	2.00	37.14	37.10	9197		
6	do	163	4601	2.04	37.14	37.10	9384	982	10272
11	do	163	4601	2.04	37.19	37.10	9393		
11	do	163	4601	2.08	37.19	37.10	9554	998	10472
16	do	163	4598	1.87	37.15	37.08	8587		
16	do	163	4598	1.92	37.15	37.08	8835	991	9702
24	do	163	4596	2.10	37.16	37.07	9673		
24	do	163	4596	2.17	37.16	37.07	9968	946	10766
26	Galloway	163	4598	2.12	37.15	37.08	9777		
26	do	163	4598	2.13	37.15	37.08	9809	1104	10897
Mar. 4	O'Grady	163	4582	2.03	37.11	36.98	9319		
4	do	163	4582	2.09	37.11	36.98	9568	980	10423
6	do	163	4585	2.06	37.11	37.00	9443		
6	do	163	4585	1.99	37.11	37.00	9142	1000	10293
12	do	163	4544	1.89	36.85	36.74	8598		
12	do	163	4544	1.95	36.85	36.74	8847	919	9641
16	do	163	4515	1.90	36.66	36.56	8600		
16	do	163	4515	1.93	36.66	36.56	8727	652	9315
19	do	163	4519	1.89	36.66	36.58	8522		
19	do	163	4519	1.89	36.66	36.58	8524	672	9195
23	do	163	4506	1.92	36.59	36.50	8766		
23	do	163	4506	1.88	36.59	36.50	8577	664	9335
Apr. 1	do	163	4527	1.95	36.69	36.63	8819		
1	do	163	4527	1.89	36.69	36.63	8572	678	9373
6	do	163	4495	1.84	36.54	36.43	8263	868	9131
9	Galloway	171	4786	3.02	38.39	38.15	14470		
9	do	171	4786	2.99	38.39	38.15	14325	1009	15406
13	do	171	4905	3.10	39.09	38.87	15174		
13	do	171	4905	3.03	39.09	38.87	14838	885	15891
15	do	171	4940	3.02	39.31	39.10	14929		
15	do	171	4940	3.09	39.31	39.10	15256	1042	16134
17	do	171	4961	2.99	39.42	39.23	14826		
17	do	171	4961	3.08	39.42	39.23	15284	893	15948
18	do	171	4910	2.92	39.18	39.04	14348		
18	do	171	4910	2.90	39.18	39.04	14245	635	14931
20	do	171	4968	3.03	39.47	39.27	15063		
20	do	171	4968	3.08	39.47	39.27	15318	1131	16321
22	do	171	4983	3.08	39.45	39.36	15339		
22	do	171	4983	3.12	39.45	39.36	15545	1121	16563
24	do	171	5018	3.14	39.79	39.57	15791		
24	do	171	5018	3.08	39.79	39.57	15440	910	16525
27	do	171	5017	3.10	39.78	39.57	15554		
27	do	171	5017	3.07	39.78	39.57	15374	1107	16571
30	do	171	5022	3.04	39.78	39.60	15254		

When several discharge measurements were made on the same date, the average was combined with the Kenora discharge to obtain the total discharge. (Engrs.)

TABLE 53—Continued

DISCHARGE MEASUREMENTS—WINNIPEG RIVER AT NORTH TUNNEL ISLAND STATION

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

Date	Hydrographer	Width Feet	Area Sq. Ft.	Mean Velocity Ft. per Sec.	Water Level Sea-level Datum		Discharge c. f. s.		
					At Bridge	At Meter Section	Tunnel Island	Kenora	Total
1915									
April 30	Galloway	171	5022	2.99	39.78	39.60	15008	1145	16276
May 4	do	171	5007	3.07	39.71	39.51	15390		
4	do	171	5007	3.04	39.71	39.51	15232	1080	16391
8	do	174	5033	3.02	39.78	39.61	15224		
8	do	174	5033	2.96	39.78	39.61	14910	919	15986
11	do	174	5021	3.16	39.75	39.54	15822		
11	do	174	5021	3.16	39.75	39.54	15856	660	16499
14	do	174	5041	3.13	39.91	39.72	15771		
14	do	174	5041	3.15	39.91	39.72	15890	878	16708
21	Pirie	183	5364	4.31	41.90	41.48	23138		
21	Galloway	183	5366	4.27	41.91	41.49	22916		
21	O'Grady	183	5364	4.15	41.88	41.48	22132	1148	23377
28	Galloway	181	5253	3.59	41.14	40.85	18856		
28	do	181	5253	3.56	41.14	40.85	18710	922	19705
June 1	do	181	5233	3.52	41.04	40.74	18437	919	19356
8	do	181	5217	3.43	40.93	40.65	17910		
8	do	181	5217	3.43	40.93	40.65	17904	954	18861
12	do	181	5238	3.60	41.06	40.77	18870		
12	do	181	5238	3.50	41.06	40.77	18350	892	19502
15	do	181	5229	3.58	41.02	40.72	18833	680	19513
18	do	181	5246	3.55	41.13	40.82	18651		
18	do	181	5246	3.57	41.13	40.82	18715	910	19593
22	do	181	5255	3.70	41.19	40.87	19430		
22	do	181	5255	3.73	41.19	40.87	19601	723	20238
24	do	181	5279	3.68	41.31	41.01	19475		
24	do	181	5279	3.72	41.31	41.01	19659	880	20447
July 8	do	186	5503	4.35	42.70	42.24	23939		
8	do	186	5503	4.40	42.70	42.24	24214	957	25033
10	do	186	5530	4.92	42.82	42.39	24441		
10	do	186	5530	4.96	42.82	42.39	24663	885	25437
13	do	186	5521	4.24	42.75	42.34	23411		
13	do	186	5521	4.33	42.75	42.34	23908	729	24389
15	do	186	5512	4.41	42.70	42.29	24308		
15	do	186	5512	4.34	42.70	42.29	23922	746	24861
21	do	186	5500	4.35	42.64	42.22	23922		
21	do	186	5500	4.29	42.64	42.22	23593	741	24499
27	do	187	5539	4.50	42.90	42.43	24924		
27	do	187	5539	4.51	42.90	42.43	24979	754	25705
30	do	188	5566	4.53	43.00	42.57	25212		
30	do	188	5566	4.53	43.00	42.57	25212	757	25969
Aug. 4	do	188	5539	4.36	42.82	42.42	24149		
4	do	188	5539	4.43	42.82	42.42	24537	758	25101
7	do	188	5530	4.35	42.78	42.37	24055		
7	do	188	5530	4.41	42.78	42.37	24386	843	25063
10	do	187	5473	4.16	42.47	42.07	22769		
10	do	187	5473	4.12	42.47	42.07	22550	737	23397
12	do	185	5447	4.03	42.30	41.94	21952		
12	do	185	5447	4.12	42.30	41.94	22441	735	22931
14	do	185	5445	4.21	42.31	41.93	22925		
14	do	185	5445	4.15	42.31	41.93	22598	735	23496
17	do	184	5418	4.07	42.15	41.78	22052		
17	do	184	5418	4.12	42.15	41.78	22323	736	22923
26	do	169	4885	2.35	38.94	38.79	11480		
26	do	169	4885	2.32	38.94	38.79	11334	673	12080
31	do	167	4776	2.37	38.24	38.14	11318		
31	do	167	4776	2.39	38.24	38.14	11414	649	12015
Sept. 2	do	167	4793	2.57	38.36	38.25	12319		12015
2	do	167	4793	2.57	38.36	38.25	12319	646	12965
4	do	167	4787	2.57	38.36	38.21	12303		
4	do	167	4787	2.60	38.36	38.21	12446	663	13038
7	do	167	4769	2.53	38.25	38.10	12066	631	12697
9	do	167	4776	2.51	38.26	38.14	11987		
9	do	167	4776	2.51	38.26	38.14	11987	705	12692
11	do	167	4774	2.51	38.23	38.13	11983		
11	do	167	4774	2.48	38.23	38.13	11840	717	12628
16	do	167	4784	2.51	38.31	38.18	12007		
16	do	167	4784	2.47	38.31	38.18	11816	932	12843
18	do	167	4773	2.37	38.21	38.12	11311		
18	do	167	4773	2.41	38.21	38.12	11502	945	12352
21	do	167	4756	2.45	38.14	38.02	11653		

When several discharge measurements were made on the same date, the average was combined with the Kenora discharge to obtain the total discharge. (Engrs.)

TABLE 53—Continued

DISCHARGE MEASUREMENTS—WINNIPEG RIVER AT NORTH TUNNEL ISLAND STATION

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

Date	Hydrographer	Width Feet	Area Sq. Ft.	Mean Velocity Ft. per Sec.	Water Level Sea-level Datum		Discharge c. f. s.		
					At Bridge	At Meter Section	Tunnel Island	Kenora	Total
1915									
Sept. 21	Galloway	167	4756	2.43	38.14	38.02	11558	970	12576
23	do	167	4768	2.47	38.22	38.09	11776		
23	do	167	4768	2.44	38.22	38.09	11633	914	12619
28	do	167	4755	2.47	38.13	38.01	11745		
28	do	167	4755	2.41	38.13	38.01	11459	1191	12793
Oct. 2	do	164	4649	1.98	37.46	37.39	9206		
2	do	164	4649	2.00	37.46	37.39	9299	967	10219
5	do	163	4593	2.00	37.13	37.05	9186		
5	do	163	4593	2.01	37.13	37.05	9232	1375	10584
9	do	163	4590	1.99	37.13	37.03	9650		
9	do	163	4590	2.02	37.13	37.03	9258	1424	10878
12	do	163	4574	2.02	37.04	36.93	9222		
12	do	163	4574	1.97	37.04	36.93	9007	1419	10534
14	do	163	4574	2.02	37.04	36.93	9267		
14	do	163	4574	1.99	37.04	36.93	9097	1401	10583
16	do	163	4576	1.92	37.05	36.94	8824		
16	do	163	4576	1.97	37.05	36.94	9025	1419	10344
19	do	163	4555	2.00	36.89	36.81	9124		
19	do	163	4555	2.03	36.89	36.81	9233	661	9839
21	do	163	4561	1.94	36.95	36.85	8849		
21	do	163	4561	1.97	36.95	36.85	8985	1420	10337
26	do	163	4569	1.83	36.98	36.89	8364		
26	do	163	4569	1.87	36.98	36.89	8530	1459	9906
28	do	163	4572	1.92	37.01	36.92	8779		
28	do	163	4572	1.89	37.01	36.92	8642	1438	10148
30	do	163	4571	1.94	36.99	36.91	8867		
30	do	163	4571	1.90	36.99	36.91	8684	1417	10192
Nov. 2	do	163	4563	1.93	36.95	36.86	8806		
2	do	163	4563	1.87	36.95	36.86	8532	1472	10141
4	do	163	4563	1.90	36.94	36.86	8669		
4	do	163	4563	1.87	36.94	36.86	8532	1501	10101
6	do	163	4568	1.90	36.99	36.89	8678		
6	do	163	4568	1.95	36.99	36.89	8907	1502	10294
9	do	163	4577	1.93	37.03	36.95	8718		
9	do	163	4577	1.95	37.03	36.95	8925	1060	9881
12	do	163	4579	1.96	37.06	36.96	8974		
12	do	163	4579	2.03	37.06	36.96	9295	927	10061
16	do	163	4574	1.89	37.03	36.93	8644		
16	do	163	4574	1.94	37.03	36.93	8873	1551	10310
18	do	163	4576	1.89	37.04	36.94	8648		
18	do	163	4576	1.92	37.04	36.94	8785	1513	10229
20	do	163	4572	1.89	37.01	36.92	8642		
20	do	163	4572	1.86	37.01	36.92	8505	1536	10109
23	do	163	4566	1.80	37.01	36.88	8219		
23	do	163	4566	1.83	37.01	36.88	8356	1516	9803
25	do	163	4567	1.91	36.99	36.89	8724		
25	do	163	4567	1.87	36.99	36.89	8541	1458	10090
27	do	163	4567	1.91	36.97	36.89	8724		
27	do	163	4567	1.88	36.97	36.89	8587	1493	10148
30	do	163	4561	1.89	36.96	36.85	8621		
30	do	163	4561	1.88	36.96	36.85	8575	1511	10109
Dec. 2	do	162	4566	1.90	36.96	36.88	8675		
2	do	162	4566	1.90	36.96	36.88	8721	1540	10238
4	do	162	4561	1.89	36.93	36.84	8620		
4	do	162	4561	1.88	36.93	36.84	8575	1498	10096
9	do	162	4536	1.90	36.80	36.68	8618		
9	do	162	4536	1.87	36.80	36.68	8482	1072	9622
11	do	162	4558	1.96	36.91	36.83	8934		
11	do	162	4558	1.93	36.91	36.83	8797	1543	10408
14	do	162	4564	1.96	36.96	36.87	8946		
14	do	162	4564	1.95	36.96	36.87	8900	1576	10499
16	do	162	4569	1.95	36.99	36.90	8910		
16	do	162	4569	1.94	36.99	36.90	8864	1483	10370
20	do	162	4560	1.94	36.91	36.84	8846		
20	do	162	4560	1.90	36.91	36.84	8663	1058	9813
23	do	162	4574	1.97	37.03	36.93	9011		
23	do	162	4574	1.91	37.03	36.93	8736	1542	10415

When several discharge measurements were made on the same date, the average was combined with the Kenora discharge to obtain the total discharge. (Engrs.)

TABLE 54—Continued

DISCHARGE MEASUREMENTS—WESTERN OUTLET—LAKE OF THE WOODS ABOVE NORMAN DAM

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

Date	Hydrographer	Width Feet	Area Sq. ft.	Mean Velocity Ft. per Sec.	Water Level Sea-level Datum	Discharge c. f. s.	Logs out of Dam
1915							
Jan. 8	O'Grady	212	5116	1.47	1060.70	7535	10
8	do	212	5116	1.47	60.70	7501	10
14	do	212	5118	1.50	60.71	7665	10
22	do	212	5118	1.51	60.71	7713	10
22	do	212	5118	1.50	60.71	7688	10
Feb. 6	do	212	5122	1.45	60.73	7434	10
16	do	212	5118	1.51	60.71	7725	10
16	do	212	5118	1.49	60.71	7621	10
Mar. 9	do	212	5105	1.45	60.65	7418	10
9	do	212	5105	1.48	60.65	7578	10
18	do	212	5091	1.45	60.58	7379	10
18	do	212	5091	1.47	60.58	7471	10
Apr. 6	do	212	5114	1.46	60.69	7459	10
6	do	212	5114	1.52	60.69	7768	10
10	do	212	5072	2.73	60.49	13824	(1) 42
10	do	212	5072	2.59	60.49	13128	42
22	Galloway	205	5044	2.58	60.41	13025	42
22	do	205	5044	2.63	60.41	13258	42
May 11	do	212	5119	2.74	60.71	14028	42
11	do	212	5122	3.00	60.73	13300	42
18	Smith & Emery	211	5081	3.48	60.54	17660	(2)134
18	do	211	5072	3.53	60.49	17907	134
18	do	211	5056	3.80	60.41	19226	134
19	do	211	5037	4.14	60.33	20863	134
19	do	211	5029	4.16	60.31	20907	134
20	do	211	5007	4.56	60.18	22804	134
21	do	211	5000	4.50	60.15	22481	.....
21	do	211	5000	4.36	60.15	21778	.....
21	do	211	5002	4.31	60.16	21554	.....
31	Galloway	212	5076	3.41	60.51	17325	(3) 83
31	do	212	5076	3.51	60.51	17833	83
June 7	do	212	5048	3.45	60.38	17435	83
7	do	212	5048	3.43	60.38	17397	83
25	do	212	5151	3.62	60.87	18659	83
25	do	212	5140	3.64	60.81	18706	83
29							101
30	do	212	5129	4.35	60.86	22340	115
July 5	do	212	5171	4.51	60.96	23323	115
5	do	212	5171	4.53	60.96	23427	115
12	do	212	5182	4.46	61.02	23111	115
12	do	212	5182	4.58	61.02	23733	115
16	do	212	5173	4.54	60.98	23488	115
16	do	212	5178	4.53	61.00	23345	115
22	do	212	5157	4.43	60.90	22844	115
22	do	212	5157	4.42	60.90	22794	115
24							126
26							142
28	do	212	5089	4.81	60.57	24478	142
28	do	212	5089	4.85	60.57	24681	142
Aug. 2	do	211	5031	4.72	60.30	23746	142
2	do	211	5031	4.69	60.30	23597	142
5	do	211	5017	4.66	60.22	23379	142
5	do	211	5017	4.65	60.22	23319	142
9							119
11	do	211	5046	4.19	60.37	21142	119
13							130
16	do	205	4946	4.36	59.93	21567	130
16	do	205	4946	4.38	59.93	21576	130
18							122

(1) Removing logs April 6th–7th. (2) Removing logs May 17th–20th. (3) Replacing logs May 21st–22d.

TABLE 54—Continued

DISCHARGE MEASUREMENTS—WESTERN OUTLET—LAKE OF THE WOODS ABOVE NORMAN DAM

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

Date	Hydrographer	Width Feet	Area Sq. ft.	Mean Velocity Ft. per Sec.	Water Level Sea-level Datum	Discharge c. f. s.	Logs out of Dam
1915							
Aug. 19							111
20							82
21							49
25							20
27	Galloway	212	5107	2.25	60.66	11492	20
27	do	212	5097	2.18	60.61	11119	20
30	do	212	5093	2.17	60.59	11052	20
30	do	212	5099	2.19	60.62	11167	20
Sept. 3	do	211	5052	2.13	60.40	10760	20
3	do	211	5052	2.14	60.40	10811	20
8	do	211	5058	2.14	60.44	10824	20
8	do	211	5058	2.18	60.43	11027	20
13	do	211	5004	2.06	60.17	10339	20
13	do	211	5004	2.08	60.17	10409	20
17	do	211	5031	2.05	60.30	10314	20
22	do	211	5031	2.14	60.30	10767	20
22	do	211	5031	2.07	60.30	10411	20
27	do	211	5002	2.00	60.16	10005	20
30							8
Oct. 1	do	211	5023	1.42	60.26	7148	8
1	do	211	5023	1.42	60.26	7128	8
4	do	205	4938	1.37	59.89	6746	8
4	do	205	4938	1.37	59.89	6805	8
8	do	205	4959	1.45	59.99	7218	8
8	do	205	4971	1.40	60.05	6957	8
13	do	211	5007	1.41	60.18	7074	8
13	do	211	5007	1.45	60.18	7246	8
18	do	211	5019	1.41	60.24	7099	8
18	do	211	5019	1.45	60.24	7289	8
22	do	211	4982	1.40	60.06	6967	8
22	do	211	4982	1.42	60.06	7061	8
27	do	211	5085	1.49	60.56	7598	8
27	do	211	5085	1.41	60.57	7170	8
Nov. 3	do	211	4994	1.38	60.12	6932	8
3	do	211	4994	1.40	60.12	6988	8
10	do	211	5050	1.41	60.34	7120	8
10	do	211	5050	1.43	60.34	7221	8
13	do	211	4999	1.34	60.14	6698	8
13	do	211	4999	1.36	60.14	6798	8
15	do	211	4992	1.34	60.11	6689	8
15	do	211	4992	1.39	60.11	6939	8
22	do	211	4992	1.34	60.12	6689	8
22	do	211	4992	1.36	60.12	6789	8
26	do	211	4990	1.39	60.10	6936	8
26	do	211	4990	1.38	60.10	6886	8
Dec. 1	do	205	4983	1.34	60.11	6660	8
1	do	205	4983	1.32	60.11	6586	8
6	do	205	4979	1.33	60.09	6630	8
6	do	205	4979	1.33	60.09	6630	8
10	do	205	4981	1.33	60.10	6625	8
10	do	205	4981	1.33	60.10	6625	8
15	do	205	4979	1.37	60.09	6812	8
15	do	205	4979	1.37	60.09	6830	8
21	do	205	4993	1.38	60.16	6931	8
24	do	205	4997	1.37	60.18	6857	8
24	do	205	4997	1.37	60.18	6835	8
28	do	205	4995	1.35	60.17	6743	8
28	do	205	4995	1.34	60.17	6694	8

TABLE 55—Continued

DISCHARGE MEASUREMENTS—MILL "A"—LAKE OF THE WOODS MILLING CO.

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

Head Race—Flume No. 1—Hydro-Electric Power House

Date.	Discharge c. f. s.	Date	Discharge c. f. s.	Date	Discharge c. f. s.	Date	Discharge c. f. s.
1915		1915		1915		1915	
Jan. 12	258	Mar. 7	54	July 26	218	Oct. 29	251
17	53	15	196			29	274
17	60	15	208	Aug. 9	294		
17	63			9	312	Nov. 24	300
17	64	June 9	275			24	294
		9	280	Sept. 24	269		
Mar. 5	150			24	264	Dec. 18	296
7	55	July 26	215			18	293

Head Race—Flume No. 2—Mill Drive

1915		1915		1915		1915	
Apr. 26	713	June 9	628	Oct. 29	667	Nov. 17	659
26	745			29	663		
		Sept. 20	666			Dec. 18	733
June 9	616	20	656	Nov. 17	642	18	693

TABLE 56—Continued

DISCHARGE MEASUREMENTS—MILL "C"—LAKE OF THE WOODS MILLING CO.

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

HEAD RACE

Date	Discharge c. f. s.	Date	Discharge c. f. s.	Date	Discharge c. f. s.	Date	Discharge c. f. s.
1915		1915		1915		1915	
Feb. 17	673	June 23	840	Aug. 13	691	Nov. 11	870
17	674	24	759			11	874
27	750	24	768	Sept. 14	648		
27	722			14	622	Dec. 13	932
		July 20	665			13	947
Mar. 16	637	20	671	Oct. 20	860		
				20	822		
June 23	854	Aug. 13	706				

TABLE 57—Continued

DISCHARGE MEASUREMENTS—OLD KEEWATIN LUMBER AND MANUFACTURING COMPANY'S HEAD RACE—KEEWATIN, ONTARIO

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

Date	Lake Level	Discharge c. f. s.	Date	Lake Level	Discharge c. f. s.
1915			1915		
Jan. 4	1060.81	171	Aug. 13	1060.99	198
4	60.81	158			
			Sept. 15	60.64	186
Apr. 14	60.68	172	15	60.64	196
14	60.68	173			
			Oct. 20	60.29	173
May 18	61.02	169	20	60.29	168
June 18	61.05	179	Nov. 17	60.31	155
18	61.05	178	17	60.31	160
July 7	61.72	217	Dec. 17	60.21	159
7	61.72	216	17	60.21	154
7	61.72	225			

TABLE 58—Continued

DISCHARGE MEASUREMENTS—WINNIPEG RIVER AT WHITEDOG RAPIDS

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

SOUTH CHANNEL

Date	Hydrographer	Width Feet	Area Sq. Ft.	Mean Velocity Ft. per Sec.	Water Level (1) Sea Level Datum	Discharge c. f. s.
1915						
Feb. 21	O'Grady	327	6321	1.54	1029.08	9723
21	do	327	6321	1.53	1029.08	9706
June 3	do	351	7385	2.52	1032.20	18591
Aug. 9	Ireland	373	9109	2.51	1033.34	22934
18	do	373	8958	2.38	1032.94	21286
23	do	373	8751	2.17	1032.43	18942

NORTH CHANNEL

Date	Hydrographer	Width Feet	Area Sq. Ft.	Mean Velocity Ft. per Sec.	Water Level (2) Sea Level Datum	Discharge c. f. s.
1915						
Feb. 22	O'Grady	39	207	1.90	1034.25	392
22	do	39	207	1.87	1034.25	387
June 4	do	46	310	3.29	1036.58	1020
Aug. 13	Ireland	(3) 41	347	3.69	1037.44	1281
19	Hendry	41	316	3.55	1037.27	1121

(1) Water level below first rapids. (2) Water level above Whitedog Rapids. (3) New section.

TABLE 61—Continued

DISCHARGE MEASUREMENTS—RAINY RIVER—INTERNATIONAL FALLS AND FORT FRANCES

RECORDS OF DEPARTMENTS OF BOTH GOVERNMENTS, ETC., AS INDICATED

REFERRED TO DEPARTMENT OF PUBLIC WORKS (CANADA) DATUM

Date	Hydrographer	Width Feet	Area Sq. Ft.	Mean Velocity Ft. per Sec.	Elevation of Water Surface at U.S.Dock		Discharge c. f. s.	Notes
					U.S.G.S. Gauge Ht.	D. P. W. Datum		
1915								
Jan. 20	Smallian—Dept. Public Works, Canada	781	6321	1.61	5.11	465.90	10183	
Feb. 10	do	776	6136	1.25	4.51	465.30	7702	
20	do	775	5837	1.40	4.16	464.95	8174	
Mar. 11	do	767	5143	1.47	3.31	464.10	7554	
Apr. 22	do	772	5283	1.53	3.81	464.60	8079	
May 12	do	781	6118	1.41	4.91	465.70	8631	
26	do	773	5516	1.31	4.01	464.80	7233	
June 25	do	782	6517	1.26	5.36	466.15	8195	
29	do	800	7965	0.77	7.26	468.05	6162	
30	do	808	8670	0.70	7.98	468.77	6069	
July 3	do	792	7251	0.88	6.26	467.05	6360	
Aug. 6	do	779	6029	1.47	4.46	465.25	8887	
Sept. 1	do	769	5085	1.50	3.36	464.15	7628	
17	do	772	5087	1.51	3.41	464.20	7690	
Oct. 13	do	779	5441	1.44	3.71	464.50	7824	
Nov. 4	do	780	5384	1.54	3.81	464.60	8274	
26	do	780	5438	1.51	3.79	464.58	8218	

TABLE 71—Continued

ESTIMATED DAILY DISCHARGE—MILL "A"—LAKE OF THE WOODS MILLING CO., KEEWATIN, ONTARIO

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

Cubic Feet Per Second

1915

Date	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	109	804	810	808	824	783	141	90	645	836	874	943
2	859	802	817	803	102	787	254	238	717	837	884	908
3	113	796	779	713	766	790	201	235	689	94	887	902
4	714	799	775	109	794	766	144	237	723	869	893	910
5	763	765	794	205	803	398	293	240	77	804	888	91
6	823	778	796	213	790	89	282	250	618	875	868	904
7	798	106	108	219	805	711	301	228	729	857	806	909
8	780	833	775	221	792	813	312	93	638	844	906	988
9	813	837	785	759	102	831	302	245	749	852	908	884
10	113	876	788	799	714	797	316	241	730	300	884	926
11	781	839	245	108	779	833	141	236	729	870	905	918
12	853	845	186	754	800	834	263	240	70	864	921	857
13	841	870	218	817	807	66	250	253	645	840	886	962
14	798	111	97	796	767	718	255	244	738	844	827	939
15	810	859	183	785	801	842	256	93	740	864	915	929
16	816	870	191	795	89	837	254	241	796	868	936	930
17	105	871	182	788	57	851	253	222	735	337	927	935
18	756	845	186	109	10	815	96	231	734	898	934	908
19	842	844	224	752	10	509	247	220	91	887	935	840
20	824	881	203	835	150	82	257	214	854	877	901	910
21	852	88	112	843	153	162	238	208	813	865	843	878
22	806	884	678	832	167	162	244	92	810	896	933	908
23	844	887	718	797	53	57	257	219	824	876	943	930
24	99	893	806	921	168	10	233	90	821	796	903	932
25	755	896	833	108	161	10	93	87	833	874	941	97
26	810	871	839	833	170	177	233	80	91	888	984	553
27	866	936	821	816	177	137	236	99	831	880	931	888
28	838	85	121	933	174	297	236	198	846	901	856	938
29	861	.....	690	854	196	309	234	94	867	927	948	923
30	808	.....	780	887	17	316	235	224	862	912	937	892
31	124	.....	830	.....	796	.....	248	225	.....	777	.....	898

TABLE 72—Continued

ESTIMATED DAILY DISCHARGE—MILL "C"—LAKE OF THE WOODS MILLING CO., KEEWATIN, ONTARIO

RECORDS OF MANITOBA HYDROGRAPHIC SURVEY

Cubic Feet Per Second

1915

Date	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	198	648	652	179	726	5	166	141	635	667	810	829
2	198	707	740	179	205	5	166	611	635	673	761	810
3	212	665	735	223	775	5	166	666	635	86	761	798
4	647	695	707	223	666	5	166	660	660	749	816	755
5	683	689	707	223	737	89	166	643	155	673	755	163
6	695	701	740	223	686	153	169	643	583	705	829	761
7	683	265	217	223	676	209	617	688	629	692	798	755
8	683	689	665	223	705	209	631	141	618	711	768	755
9	695	735	760	219	177	209	614	563	635	679	816	749
10	208	735	740	214	600	209	631	614	635	322	780	749
11	530	735	760	223	686	209	147	643	660	692	835	822
12	695	707	725	700	705	209	581	662	156	692	810	877
13	658	707	740	730	716	209	637	649	594	731	822	816
14	695	187	216	727	737	209	662	654	618	743	835	822
15	689	706	629	731	737	209	643	148	642	718	774	810
16	707	770	725	755	170	209	662	588	642	761	768	774
17	248	740	701	709	721	209	662	656	642	374	810	871
18	680	740	745	178	782	209	177	649	623	743	786	816
19	740	735	735	639	822	209	575	662	160	761	822	841
20	740	740	745	722	740	215	637	643	692	774	780	816
21	740	210	179	755	730	648	637	649	660	761	852	780
22	740	692	179	708	790	670	637	138	648	755	768	792
23	707	740	179	750	179	714	662	141	660	774	786	792
24	217	740	179	750	718	744	631	187	679	692	786	810
25	648	740	179	186	719	744	147	187	692	749	829	194
26	730	755	179	731	770	617	600	190	160	761	798	457
27	740	755	179	718	770	166	643	206	705	718	792	822
28	740	248	194	727	729	564	631	160	660	810	829	798
29	713	.....	678	735	719	615	637	160	673	768	822	810
30	707	.....	745	765	159	653	625	160	705	768	841	841
31	220	.....	335	.....	5	.....	643	170	.....	768	.....	780

TABLE 73—Continued

STORAGE, OUTFLOW, AND INFLOW—LAKE OF THE WOODS

Date	1915				
	Lake Level	Change in Storage		Outflow Rate c. f. s.	Inflow Rate c. f. s.
		Feet Depth	Rate c. f. s.		
Jan. 1-10	1060.80	0.0	0	9410	9410
11-20	60.80	0.0	0	9934	9934
21-31	60.80	0.0	0	9860	9860
Feb. 1-10	60.80	0.0	0	10010	10010
11-20	60.80	0.0	0	10027	10027
21-28	60.78	−0.02	− 1198	9848	8650
Mar. 1-10	60.76	−0.02	− 958	9899	8941
11-20	60.73	−0.03	− 1437	9379	7942
21-31	60.70	−0.03	− 1307	9237	7930
Apr. 1-10	60.73	0.03	1437	10923	12360
11-20	60.81	0.08	3833	15832	19665
21-30	60.89	0.08	3883	15942	19775
May 1-10	61.02	0.13	6229	15782	22011
11-20	61.11	0.09	4312	17180	21492
21-31	61.10	−0.01	− 436	19696	19260
June 1-10	61.07	−0.03	− 1437	18853	17416
11-20	61.32	0.25	11979	18991	30970
21-30	61.73	0.41	19646	20397	40043
July 1-10	61.81	0.08	3833	23913	27746
11-20	61.62	−0.19	− 9104	24480	15376
21-31	61.35	−0.26	−11325	24897	13572
Aug. 1-10	61.06	−0.30	−14375	24750	10375
11-20	60.83	−0.23	−11021	22727	11706
21-31	60.62	−0.21	− 9148	13217	4069
Sept. 1-10	60.48	−0.14	− 6708	12150	5442
11-20	60.38	−0.10	− 4792	11885	7093
21-30	60.31	−0.07	− 3354	11931	8577
Oct. 1-10	60.28	−0.03	− 1437	9810	8373
11-20	60.24	−0.04	− 1917	9831	7914
21-31	60.20	−0.04	− 1742	9696	7954
Nov. 1-10	60.20	0.00	0	9837	9837
11-20	60.22	0.02	958	9862	10820
21-30	60.23	0.01	479	9770	10249
Dec. 1-10	60.24	0.01	479	9533	10012
11-20	60.26	0.02	958	9735	10693
21-31	60.28	0.02	871	9690	10561

Lake levels refer to elevations on the 1st, 11th, and 21st of each month.

Inflow represents net available runoff from entire watershed, evaporation from lake having been cared for by method of computation used.

TABLE 75—Continued

DAILY DISCHARGE—RAINY RIVER AT INTERNATIONAL FALLS AND FORT FRANCES

Cubic Feet Per Second

Date.	1915											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	10092	7153	6660	7778	8089	7200	6161	9181	7466	8534	6284	8312
2	10320	8292	8352	7652	7406	6356	6171	7942	7441	8396	7309	8467
3	6610	8175	8374	7438	7460	7263	7066	9920	8023	5796	7621	9109
4	9030	8291	8296	6763	8264	7306	7809	10107	8784	6761	8042	9108
5	10460	8083	8318	6807	8272	7276	6084	10200	6446	8130	7349	6126
6	10052	8281	8308	8080	7973	7711	7630	9742	3494	8126	7339	6944
7	10057	6792	5760	7755	8213	7363	8746	9592	6036	8134	5368	9230
8	10277	7193	6619	8090	6940	7851	8289	9310	7840	8096	6010	9186
9	10360	8245	7509	7866	5165	7781	8102	8952	7802	8096	7437	9389
10	6981	8247	7357	7520	8135	7773	8250	9340	7742	5561	7430	10040
Av.	9424	7875	7555	7575	7592	7388	7431	9429	7107	7563	7019	8591
11	8635	8360	7106	5395	8945	8342	7973	9720	7772	6542	7369	9809
12	10352	8178	7558	6308	9580	7918	8551	9710	7370	8044	7374	7437
13	10330	7746	7461	7537	9580	6847	8609	9684	6669	7491	7379	8105
14	10137	6364	5999	8088	9600	7553	8912	9694	7521	7153	5078	9935
15	9595	6864	6366	8108	7734	6474	9051	8908	7669	6804	6109	9970
16	9565	8453	7337	8072	8019	6448	8466	8034	7753	6736	6538	9930
17	9183	8213	7108	8152	8426	6803	7806	8441	7817	5682	6767	9412
18	8220	8200	7376	5680	7559	7320	8722	8446	8214	5511	7425	9777
19	9555	8400	7630	6611	8982	7064	7766	8483	6288	6663	7395	7702
20	9545	7963	7440	8120	8714	8199	9050	8463	7090	6458	6332	8113
Av.	9512	7874	7138	7207	8714	7297	8491	8958	7416	6708	6777	9019
21	9508	7164	6467	8180	8682	7934	8627	8444	8286	7090	5285	10030
22	9451	6326	6327	8144	6739	7672	8606	8374	8072	7069	6191	9466
23	8882	8442	7361	8184	7193	7570	7846	8009	8135	6444	7427	9856
24	7938	8417	7289	6443	5360	8032	8832	8453	8858	5222	7444	10095
25	8714	8262	7599	5417	7815	8086	8367	8231	8829	6303	7514	6419
26	9425	7995	8065	7552	8313	7950	8732	8301	6019	7318	7397	4424
27	8807	7793	8224	8280	7816	6694	8849	7926	6944	7275	7477	7568
28	8564	7527	6834	8574	7958	6635	9531	7820	8038	7311	5794	9348
29	9090	.....	6726	8228	6914	6343	9596	7181	8302	7266	6670	9348
30	9201	.....	8226	8245	6307	6324	9086	6999	8552	7278	8302	9718
31	7529	.....	7994	.....	5803	.....	8966	7543	.....	5174	.....	10000
Av.	8828	7741	7374	7725	7173	7324	8994	7935	8004	6704	6950	8752
Mon. Mean	9241	7836	7356	7502	7805	7336	8327	8747	7509	6983	6915	8786

For explanatory note relating to these discharge values see page 260.

TABLE 52—Continued
WATER LEVELS—VERMILION LAKE—TOWER, MINN.
RECORDS OF INTERNATIONAL JOINT COMMISSION

1915

Date	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1				2.60	2.75	3.10	4.10					
2	2.70			2.60	2.75	3.15	4.10					
3				2.60	2.75	3.15	4.10					
4				2.60	2.80	3.15	4.05					
5				2.60	2.80	3.20	4.05					
6		2.60	2.90	2.55	2.85	3.30	4.10					
7				2.55	2.85	3.35	4.15					
8				2.55	2.90	3.35	4.15					
9	2.65			2.60	2.90	3.40	4.20					
10				2.60	2.90	3.40	4.20					
11				2.50	2.90	3.45	4.20					
12				2.50	2.85	3.45	4.20					
13		2.55	2.70	2.50	2.80	3.50	4.20					
14				2.55	2.80	3.50	4.20					
15				2.55	2.85	3.60	4.20					
16	2.65			2.50	2.85	3.60	4.20					
17				2.40	2.85	3.65	*4.20					
18				2.40	2.85	3.70						
19				2.40	2.85	3.80						
20		2.50	2.60	2.40	2.90	4.00						
21				2.45	2.90	4.05						
22				2.45	2.95	4.05						
23	2.62			2.45	2.90	4.10						
24				2.50	2.90	4.15						
25				2.55	2.95	4.15						
26				2.55	3.00	4.20						
27		2.55	2.60	2.55	3.00	4.20						
28			2.60	2.60	3.00	4.15						
29			2.60	2.60	3.00	4.15						
30	2.60		2.60	2.70	3.10	4.15						
31			2.60		3.10							

* Gauge readings discontinued for 1915.

TABLE 79—Continued
DAILY DISCHARGE—LITTLE FORK RIVER—LITTLE FORK, MINN.
RECORDS OF UNITED STATES GEOLOGICAL SURVEY

Cubic Feet Per Second

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1915												
1	80	110	130	700								
2	80	110	130	700								
3	80	110	130	700								
4	80	110	130	700								
5	80	110	130	700								
6	80	110	130	700								
7	80	110	130	700								
8	80	110	130	700								
9	80	110	130	700								
10	80	110	130	700								
11	80	110	130	700								
12	80	110	130	700								
13	80	110	130	1540								
14	80	110	130	1280								
15	80	110	130	989								
16	80	110	130	831								
17	80	110	130	720								
18	80	110	130	683								
19	80	110	130	647								
20	80	110	130	683								
21	80	110	130	719								
22	80	110	130	756								
23	80	110	130	831								
24	80	110	130	919								
25	80	110	130	989								
26	80	110	130	1030								
27	80	110	130	1070								
28	80	110	130	1110								
29	80		130	1110								
30	80		130	1070								
31	80											
Monthly Mean Discharge, Cu. Ft. per Sec.	80	110	130	847	2000	4500	1500	350	200	650	925	250
Inches Depth on Drainage Area	0.06	0.07	0.09	0.57	1.39	3.03	1.04	0.24	0.13	0.45	0.62	0.17

From Jan. 1 to Apr. 12, 1915, the discharge was estimated from discharge measurements, observers' reports, and climatological records.

During high water in May, 1915, the old rating of the Little Fork gauge was destroyed. The monthly estimates given for May to December, inclusive, are approximate, being possibly 10 to 15 per cent in error, but may be used until a new rating of this gauge has been established and daily discharge values obtained for this period. (Engrs.)

TABLE 81—Continued

DAILY DISCHARGE—VERMILION RIVER—OUTLET LAKE VERMILION, MINN.

RECORDS OF UNITED STATES GEOLOGICAL SURVEY

Cubic Feet Per Second

Day. 1915	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	111	106	101	80	101	287	930	672	287	139	420	244
2	111	106	98	80	106	287	930	672	287	139	321	244
3	111	106	98	80	111	272	930	672	272	139	321	244
4	111	106	95	80	114	272	930	672	257	152	187	244
5	111	106	95	80	117	272	930	540	257	171	187	231
6	111	106	90	83	122	287	930	540	231	187	183	231
7	111	106	90	86	127	304	930	540	231	187	183	231
8	111	106	86	86	130	321	930	540	208	183	183	231
9	111	106	86	83	134	321	930	540	187	183	183	231
10	111	106	86	83	139	358	870	540	187	187	187	231
11	111	106	86	86	163	398	870	515	187	187	187	231
12	111	106	86	86	171	398	930	515	187	244	244	231
13	111	106	86	90	171	490	870	515	183	244	321	231
14	111	106	86	90	163	590	870	515	183	244	420	231
15	111	106	86	90	163	618	870	420	177	244	420	231
16	111	106	86	90	208	728	870	420	171	244	420	231
17	111	106	86	90	208	755	870	420	167	244	420	231
18	111	106	86	90	231	755	870	420	163	321	420	231
19	111	106	86	90	231	810	870	398	163	321	420	231
20	111	106	86	90	257	810	870	398	163	420	420	220
21	111	106	83	90	257	810	810	398	163	420	420	220
22	106	106	83	90	272	870	755	378	158	208	231	220
23	106	106	83	90	272	870	755	378	158	208	231	220
24	106	106	83	90	272	870	782	358	152	208	231	220
25	106	106	83	95	272	870	782	358	152	208	231	208
26	106	106	83	95	272	870	755	358	148	208	231	208
27	106	101	83	95	272	930	700	340	148	208	231	208
28	106	101	80	98	272	930	700	321	148	208	244	208
29	106	.....	80	98	272	930	728	321	144	208	244	208
30	106	.....	80	101	272	930	728	321	144	208	244	208
31	106	.....	80	.....	272	.....	645	304	.....	272	.....	208
Monthly Mean Discharge, Cu. Ft. per Sec	109	106	87	89	198	607	843	461	189	224	286	226
Inches Depth on Drainage Area	0.26	0.23	0.21	0.21	0.48	1.43	2.05	1.12	0.44	0.54	0.67	0.55

TABLE 82—Continued

DAILY DISCHARGE—KAWISHIWI RIVER—NEAR WINTON, MINN.

RECORDS OF INTERNATIONAL JOINT COMMISSION, COÖPERATING WITH UNITED STATES GEOLOGICAL SURVEY

Cubic Feet Per Second

Day. 1915	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	235	214	192	170	55	1480	2570	640	323	80	1266	1235
2	235	213	187	170	55	1590	2710	517	645	80	1207	963
3	235	211	182	170	57	1360	2570	556	1300	80	1134	963
4	235	210	178	170	59	666	1820	386	1500	268	1070	963
5	235	208	173	169	59	1490	1710	665	1220	93	970	963
6	235	207	168	168	62	1400	2210	435	993	695	881	963
7	235	205	163	167	62	1100	2200	1020	1020	183	938	963
8	235	204	165	166	64	658	1800	972	997	205	1082	963
9	235	203	168	165	66	1180	1990	947	.....	357	1290	963
10	235	201	170	164	66	1370	1940	425	.....	420	1200	692
11	232	200	173	163	68	862	2310	324	.....	862	1193	692
12	230	199	175	164	68	.....	1510	326	.....	1348	1200	692
13	227	198	177	166	71	2020	1440	278	201	462	1183	666
14	224	197	180	167	986	2040	2260	276	313	1061	1166	666
15	221	197	180	169	276	2030	1950	275	470	1149	1863	666
16	219	197	180	170	689	2790	2730	338	448	1298	1673	666
17	216	197	180	3000	407	3100	2760	366	423	1435	1635	640
18	216	197	180	92	380	3170	2580	264	351	1748	1597	640
19	216	197	180	87	903	3500	1230	83	170	1792	1560	640
20	216	197	180	82	1790	3760	914	825	163	1946	1523	640
21	216	197	180	77	1960	3620	1830	774	166	1868	1486	640
22	216	197	179	72	1580	3170	1100	690	525	1708	1450	640
23	216	197	177	67	1320	2910	919	1410	186	1630	1413	640
24	216	197	176	62	1430	3160	1110	922	689	1695	1377	640
25	216	197	174	57	937	3060	1690	687	186	1232	1341	640
26	216	197	173	57	.....	3540	1180	1040	186	1371	1341	640
27	216	197	171	57	.....	3390	1280	758	780	1341	1305	640
28	216	197	170	53	.....	2800	1090	728	227	1256	1305	615
29	216	.....	170	51	.....	2580	1160	166	943	1256	1270	615
30	216	.....	170	53	.....	2690	1190	136	80	1223	1270	590
31	216	.....	170	.....	1080	.....	538	139	.....	896	.....	565
Monthly Mean Discharge, Cu. Ft. per Sec	224	201	176	218	560	2293	1751	560	558	1001	1306	745
Inches Depth on Drainage Area	0.22	0.18	0.17	0.21	0.54	2.16	1.70	0.54	0.53	0.97	1.23	0.72

ATTIC SHELVING